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ORIGINAL LECTURES.

THE TREATMENT OF SYPHILIS.[1]

A Clinical Lecture.

BY PROF. DUJARDIN-BEAUMETZ.

GENTLEMEN: In the exposition which I desire to make of the treatment of syphilis, I shall endeavor to be as brief and as practical as possible. I shall, then, put aside the great questions which a consideration of treatment raises, and especially those pertaining to public hygiene and prophylaxis which are so earnestly discussed to-day, and shall concern myself exclusively with the means which will enable you to cure as speedily as possible the various manifestations of venereal disease.

Syphilis is unfortunately a malady whose frequency increases daily, and whose symptoms you will in your practice have to combat a great many times.

I shall not, then, discuss before you the origin of venereal disease. It is probable that, like the greater number of diseases which afflict humanity, syphilis was known in the first periods of the human race, and if we may credit Parrot, the prehistoric man was not exempt from it. Nor shall I discuss the necessity of mercury in the treatment of syphilis; this question seems decided at the present day, and it would be to gainsay the clearest evidence not to admit the efficacy of mercurials in this disease. I am well aware that abuses have been made of this remedy; that not all cases of syphilis are curable by quicksilver; that the treatment is not suitable to all periods of the malady; but what I cannot understand is the obstinacy of a small, though influential, number of physicians, who refuse to acknowledge, as demonstrated, the marvellous action of mercury in a great many cases of syphilis.

It suffices to have been an attentive observer, during one's practice, of a few cases of syphilis with cerebral complications of great gravity, and to have seen them disappear as by enchantment under the influence of an energetic mercurial course, to compel one to admit, without reservation, the therapeutic power of mercury in syphilis. I am going, then, to set forth at some length the fundamental principles of this hydrargyrate medication.

Considered by the writers of antiquity as one of the most energetic poisons, mercury was used externally by the Arabs; Rhazes recommended mercurial applications as part of the treatment of tinea, of scabies, of the mange, and of all wounds of bad nature, and as it is the property of syphilis to produce cutaneous ulcers of foul aspect, it is easy to understand how, from the appearance of the epidemic of syphilis at the end of the fifteenth century, this medicament came to be used in the treatment of these sores. It is then a matter of history that Marcellus Cumanus in 1495, Gasper Torella in 1497, Conrad Gilini still later employed mercurial ointment in the treatment of the grave cutaneous affections which were observed in France and Italy as a sequence of the siege of Naples.

The introduction of mercury into practice as an internal remedy was of later date, and it was not till 1536 that Matthiolus dared prescribe it internally for syphilis, and since this epoch down to the present time, the medical profession has not ceased to administer this medicament, and to note its good effects. Notwithstanding the multiplicity of works on the subject, we are ignorant of the *modus operandi* of this remedy, and while no medicine is in so general use in syphilis, there is none whose physiological action is more obscure. I am nevertheless going to give you some information which we possess relative to the ways of absorption and elimination of mercury, and I will do this, taking as my principal guide the remarkable work which my colleague in this very hospital, Dr. Hallopeau, has devoted to this medicament.[1] Mercury may penetrate the economy, either by the digestive tube, by the respiratory passages, or by the skin, and therapeutics utilizes all of these ways.

There has been much discussion about the penetration of mercury by the skin. It is known, in fact, that quicksilver when finely divided, as it is in mercurial ointment, may enter the economy through the skin, when not devoid of its epithelium, and this is one of the methods by which salivation may be most rapidly produced. How does this penetration take place? Some, as Overbeck, Eberhards, Oesterlen, have pretended that mercury in the metallic state penetrates the subcuticular vascular network. Others, as Rindfleisch, have maintained that this penetration of mercury in the metallic state is impossible, and that it is only after having been transformed into a soluble chloride by the sudoral secretion, that quicksilver enters the economy. The recent experiments of Fleischer give much support to these last views.

It is then in the state of chloride, and especially of bichloride, as Mialhe[2] affirms, that all mercurial prepa-

[1] Translated from advance sheets by E. P. Hurd, M.D., of Newburyport, Massachusetts.

[1] Hallopeau. De Mercure: Thesè d'agregation. Paris, 1880.

[2] Mialhe has pretended that mercury does not penetrate the system except in the state of bichloride, or in the form of an alkaline hydrargyrate-chloride. The protoxides undergo transformation, he thinks, into protochlorides, and then into bichlorides.

Voit admits the same thing—to wit, that the suboxides undergo transformation into calomel, and the oxides into bichloride; these last unite with the chloride of sodium and albumen of the blood.

The recent investigations of Bucheim and of Ottingen and those of Otto Graham make it appear probable (contrary to the views of Mialhe) that the protochloride combines with albumen to form an assimilable albuminate of protoxide of mercury.

Bellini has studied the modifications which the chlorides, the bromides, and the iodides undergo. Calomel, according to him, dissolves in the stomach and in the intestines under the influence of chlorides and lactic acid, being transformed into a double chloride of mercury and sodium and into lactate of mercury. The iodides and the bromides undergo a similar change, being transformed into double salts under the influence of the alkaline chlo-

rations enter the blood, combined, be it understood, with the albumen of the blood, thus constituting a double albuminate or peptonate of hydrargyrum and of sodium.

When once it has penetrated the blood, mercury, after having sojourned a variable time in the economy, is eliminated by divers emunctories, in particular by the kidneys, by the feces, by the milk, by the sweat, and by the saliva. The duration of this elimination depends on the duration of the mercurial treatment, and when this has been very prolonged, one may find mercury in the urine for several weeks after the treatment has been discontinued. Mercury seems, in fact, to fix itself in different viscera, and in particular in the liver.[1] It has even been maintained that it is this fixation of mercury in the bowels which provokes those osteocopic pains so frequent in the advanced periods of syphilis. This interpretation is absolutely erroneous, for there are syphilitic patients who, never having followed any mercurial treatment, have osteocopic pains of the most violent kind, and these pains seem to be mitigated under the influence of mercurial preparations.

Among the channels for elimination of mercury, there are two which interest the therapeutist—the mammary and the salivary glands. The fact of elimination by the milk, enables us to apply to the treatment of syphilis in the new-born child, the administration of mercury to the nurse. The fact of elimination by the saliva explains the cause of the salivation which so frequently attends the mercurial treatment. It is, in fact, maintained that it is the presence of chlorides of mercury in the saliva which is the point of departure of the irritation of the mucous membrane of the gums. At the same time this point of pharmaco-dynamic action demands to be studied anew, for the salivation seems to depend especially on the mode of administration of the mercury. Very easily provoked by cutaneous inunctions, it is exceptionally produced by hypodermic injections.

Can we find in the physiological and toxicological action of mercury the explanation of its anti-syphilitic action? Unhappily, no; and the study of mercurialization, whether slow and chronic or sudden and acute, observed so often in men who work in industries where mercury is in use, does not furnish us any data for the solution of this important therapeutic question.

It has been said that mercury acts on the blood-globules and the plasma; this may be true in the normal state, and when it acts as a poison. But this is the very opposite of what takes place in syphilitic patients, where one constantly sees under the influence of a well-regulated treatment, the number of red globules augment, as well as their richness in hæmoglobin. The experiments of Wilbouchewitz, of Moscow, of Keyes, of Robin, of Schlesinger, are absolutely confirmative in this respect. Mercury cures syphilitic anæmia, but it is powerless to benefit other anæmias. It is necessary then to admit that mercury possesses a specific property in the treatment of syphilis, and we are obliged to content ourselves with the data which are furnished us by empiricism and tradition concerning the antisyphilitic action of mercury.

The absorption of mercury may take place, as I have told you, by three ways: by the skin, by the lungs, by the stomach. Therapeutics utilizes these three modes of introduction, and thence result three different modes of treatment of syphilis: the dermic and the hypodermic method, the respiratory method, and finally administration by the alimentary canal.

Let us examine the advantages and disadvantages of each of these methods:

The dermic method is the most ancient. We have seen that it was by applications of mercurial ointment that attempts were first made to cure syphilitic sores. This method is still employed at the present day; nevertheless, since the improvements in hypodermic injections of our time, the dermic method is much less used than formerly. Frictions with mercurial ointment, if they cause mercury rapidly to enter the economy, have the very serious objection of speedily determining salivation. For these inunctions mercurial ointment is used; the "fortior" and the "mitior." The stronger ointment is called the Neapolitan cerate. As it is generally admitted that mercury does not penetrate the system till it has been subjected to the action of the sudoral secretion, the rule has been to practise these inunctions on parts of the skin where the sweat glands are the most numerous, as in the arm-pit, the groin, the soles of the feet. Denis Dumont has even proposed, under the name of *Neapolitan hose*, a very convenient method for making these applications, especially when the patient wishes to conceal the treatment which he is pursuing. This method consists in making the patient put on, at bedtime, a pair of *hose* or *long stockings*, the interior of which has been medicated with Neapolitan ointment. As for the frictions, they are repeated once or twice a day, according as one wishes to obtain a more or less rapid action. The rubbing lasts from five to ten minutes, and when once finished, it is the custom to wash the parts where the inunction has been made, to avoid the local irritant action determined by prolonged application of the mercurial pomade.

rides and lactic acid. A part of these salts enters the circulation, another part is transformed into sulphide of mercury in the large intestines, and eliminated in the feces. (Rindfleisch, Arch. de Dermatol., t. ii. p. 309. Overbeck, Mercure und Syphilis, Berlin, 1861. Hallopeau, Th. d'agregation, 1878. Voit, Physiologie, Chemische Untersuchungen, 1 Heft, Augsbourg. 1858. Blomberg, Nagra ord om quicksellfvrets absorpcion, af organismen, 1867.)

[1] The elimination of mercury is effected by the kidneys, intestines, mammary glands, perspiratory and salivary glands. The utility of this last kind of elimination has been much disputed of late years, yet Bernaski has determined the presence of mercury in the saliva taken directly from Steno's duct.

Personne, Binz, Lewald, and Klink have found mercury in the milk of nurses submitted to mercurial treatment.

Riedérer has examined experimentally the quantity of mercury eliminated by the different emunctories. In an animal which had taken, in twenty-nine days, nearly two grammes of mercury, during this time four per cent. was found in the feces, nine per cent. in the urine, and during the succeeding eighty-one days there was still found in grammes and fractions of a gramme, .0568 in the feces, .0040 in the urine, and .0026 in the liver.

Mayencon and Bergeret have studied the rapidity of elimination of the mercurial preparations. Experiments show that the greater part of the medicament is immediately eliminated in the urine, and that another part, after having become fixed in the tissues, is eliminated very slowly and insensibly, insomuch that several days after the cessation of the mercurial treatment the presence of mercury is detected in the urine. (Bergeret and Mayencon, "Clinical Means for Recognizing Mercury in the Excretions, and principally in the Urine;" Lyon Medical, t. iv., 1873, p. 179.)

Mercurial baths form a part of the dermic method of treatment. Here the penetration of the mercury into the system is much less active, and if baths of corrosive sublimate render some service in therapeutics, it is simply by their local action. These baths, the only mercurial baths employed, contain ʒv of corrosive sublimate for a full bath.[1] You can add to these baths common salt or sal ammoniac. It is also the local effect that is sought for when the various mercurial plasters are prescribed, the most known of which is that of Vigo.

The hypodermic method of the treatment of syphilis is of quite recent date, and thanks to the improvements which have been made in the liquids used in these injections by Martineau and Delpech, this method, which has all the advantage of the dermic mode without the disadvantages, namely, a very prompt and energetic action, without salivation, tends to take the place of the dermic method, It was Hebra and Charles Hunter who, in 1863, first practised sublimate injections in the treatment of syphilis, and in 1868 Liegeois popularized this method in France, but these first trials were unsatisfactory, and the method was abandoned. Corrosive sublimate is in fact very irritating, and it is easy to see that these subcutaneous injections, very painful as they are, might cause grave local lesions. For the solutions of corrosive sublimate and of chloride of sodium, which were employed by Hebra, Charles Hunter, Lewing, Liegeois, and Tachard, it was proposed to substitute the cyanide or the bicyanide of mercury as Mandelbaum and Guntz proposed. Others, as Luton and Fürbringer, advised injections of metallic mercury, rubbed up with glycerine and gum arabic. But all these solutions were always painful, and it was only by combining albumen and peptones with corrosive sublimate that solutions were obtained having a very feeble irritant action. This is what has been accomplished by Neumann, Bamberger, Terrillon, and especially Martineau and Delpech, who, in uniting chloride of ammonium with peptones and with corrosive sublimate, have made a solution of mercuric ammoniacal peptone which is absolutely neutral, keeps perfectly, and rarely determines local lesions when properly injected.[2]

[1] The formula of corrosive sublimate baths is as follows:

1.

℞.—Bichloride of mercury, ... 2 parts.
Alcohol, ... 5 "
Distilled water, ... 200 " —M.

2.

℞.—Bichloride of mercury, ... 3 parts.
Chloride of ammonium, ... 3 "
Water, ... 1000 " —M.

3.

℞.— Bichloride of mercury, ... 1 part.
Chloride of sodium, ... 1 "
Warm water, ... 100 " —M.

[2] Neumann maintains the advantage of subcutaneous mercurial injections; he lauds especially solutions of corrosive sublimate with albumen and peptones as being but slightly, if at all, irritating. Bamberger uses the following solution: To 20 parts by weight of albumen, as pure as possible, add 30 parts by weight of distilled water, and filter. Mix 10 parts by weight of this albuminous solution with 6 parts by weight of a 5 per cent. solution of corrosive sublimate, and 6 parts by weight of a 20 per cent. solution of common salt, and 8 parts by weight of distilled water. Let it stand two days, and filter with care. 320 grains parts by weight of this solution contain gr. ij$\frac{8}{10}$ of metallic mercury.

It is necessary, in order to avoid accidents, to make these injections as deeply as possible. And here, as in the case of subcutaneous injections of chloroform, you ought to thrust your needle perpendicularly into the tissues; therefore, it is almost always in the hips that we make these injections. In the thousands of subcutaneous injections which Martineau has performed in the Hospital of Lourcine, he has never observed any grave accidents. At the same time, it is well to remember that in the majority of cases these injections are painful, and that they leave behind them an induration of tissue which lasts for some time. There are even patients, females especially, so hyperæsthetic that they cannot bear these injections. Despite these cases, which are exceptional, the hypodermic method is excellent, especially in hospital practice, being sure and speedy. In private practice this mode of treatment is more difficult to carry out; you ought then to reserve it exclusively for grave cases, where you want a prompt and energetic action, as in syphilis of the brain and spinal cord. These injections contain in each syringeful, as you well know, gr. ⅙ of corrosive sublimate. When you do not wish to go to the trouble of preparing the rather complex solution of Delpech, you can prescribe subcutaneous injections made as follows:

℞.—Powdered peptone (Catillon), . 3 parts.
Chloride of ammonium, pure, . 3 "
Corrosive sublimate, . . . 2 "
Glycerine, ... 50 "
Water, ... 150 " —M.

Terrillon has made trials of hypodermic injections of the peptonates of mercury. He made use of Bamberger's solution, which is as follows: Take of meat peptones, gr. xv; water, f ʒj $\frac{60}{100}$. Filter; and add: Solution of corrosive sublimate (1 : 500), f ʒv $\frac{41}{100}$; solution of chloride of sodium (20 per cent.), f ʒiv $\frac{33}{100}$. Distilled water sufficient to make f ʒ iij $\frac{38}{100}$.

Each f ʒvss of this solution contains gr. ½ of mercury. In combination with peptones, these injections cause no pain, if made deeply in the subcutaneous tissue. Delpech has advised the following formula for the preparation of mercuric ammoniacal peptones. Take of

Dried peptone (Catillon), ... 3 parts.
Chloride of ammonium, ... 3 "
Mercuric chloride, ... 2 " —M.

This powder is one-fourth part corrosive sublimate; hence one gramme contains gr. iij¼ of corrosive sublimate. From this formula divers preparations are made:

1. Hypodermic injections—

℞.—Powder of peptonate of mercury, . . 1 part.
Distilled water, ... 50 "
Glycerine, ... 10 " —M.

Each syringeful of this solution corresponds to gr. ⅙ of corrosive sublimate.

2. A solution which is taken internally—

℞.—Powder of peptonate of mercury, . . 1 part.
Distilled water, ... 200 "
Glycerine, ... 50 " —M.

Every gramme of this solution contains 1 : 1000 of corrosive sublimate.

3. Pills—

℞.—Powder of peptonate of mercury, . . ʒss
Opium, ... grs. viij
Powder of guaiac, ... ʒss
Powder of ext. licorice, sufficient to make 100 pills.

Each pill contains gr. $\frac{1}{15}$ of corrosive sublimate.

Each syringeful of this solution contains gr. ⅙ of corrosive sublimate. These injections are practised every day or every second or third day, according to the urgency of the case, and I shall return presently to the doses, when I come to the syphilitic complications.

The respiratory method, which has for its basis mercurial inhalations, is of very ancient origin. It has been restored to practice the past few years by Langston Parker, of England, by Bumstead, of New York, and by Horteloup, in France. This method, which may be called *dermo-pulmonary*, consists in placing the patient in a box in which are burned troches containing cinnabar or corrosive sublimate. The penetration of vapor is effected chiefly by the lungs. The box, being of loose construction, allows the fumes to escape into the outside air. I have never employed this *dermo*-pulmonary method, but it seems to me every way inferior to the hypodermic mode, and is certainly less precise and sure. In fact, this kind of treatment is not likely ever to be popular.

I come now to the last method of administration, namely, that by the alimentary canal, which is by far the most available and practical. Mercury is employed under all its forms;[1] metallic mercury, the most common preparation of which is the blue pill; bichloride of mercury, which is the active ingredient of the liquor of Van Swieten; the pills of Dupuytren; and the ordinary solution of the British Pharmacopœia; the protiodide (Ricord's pills); and the biniodide, which is contained in the syrup of Gibert. These are the forms most in use in our country. There are, however, a prodigious number of hydrargyrate preparations in the shops of pharmacists—pills, solutions, potions, pastilles—whose formulæ you will find in most of your treatises on syphilis. What salt of mercury ought you to choose? It may be replied that all the preparations I have just enumerated are suitable. At the same time, for my part, I prefer the bichloride and biniodide, to all the others, and I consider the bichloride, and especially the solution of Van Swieten which contains it, as the most active in the first periods of syphilis, of all preparations given by the mouth. This preference is not only based on the results of my practice, but it is also in conformity with what we know of the introduction into the economy of mercury, which always enters the circulation in the state of bichloride. If you employ the bichloride, whether in the form of Dupuytren's pills or Van Swieten's liquor, I advise you always to administer these preparations with food or with milk; you will thus avoid, as far as possible, the irritant local action of corrosive sublimate on the alimentary mucous membrane. Such are the principles of the mercurial treatment of syphilis. I must now point out certain rules which should guide you in this treatment—when you ought to commence it, and when you ought to leave it off. But before proceeding to this part of my task, I must say a few words about the accessory modes of treatment.

(To be concluded.)

[1] Following are some of the forms of administration of mercury by mouth:

1. *Blue pills.* The formula is too well known to need repetition here.

2. *Sedillot's pills.* Each pill contains gr. iss of mercurial ointment, with gr. $\frac{9}{10}$ of castile soap, and gr. $\frac{6}{13}$ of licorice powder.

3. *Bichloride of mercury.* Van Swieten's formula is as follows:

℞.—Bichloride of mercury, ... 1 part.
Rectified spirits, ... 100 "
Pure water, ... 900 " —M.

One teaspoonful contains gr. $\frac{1}{13}$ of corrosive sublimate.

4. *Mauriac's modification of Van Swieten's liquor—*

℞.—Spirits of peppermint, ... 4 parts.
Hydrarg. bichlorid. . . . . 1 "
Alcohol, ... 95 "
Syrup of morphia, ... 250 "
Orange-flower water, ... 100 "
Distilled water, ... 50 " —M.

This preparation is twice the strength of Van Swieten's.

5. *Dupuytren's pills—*

℞.—Hydrarg. bichlorid., ... gr. ⅙
Ext. opii, ... gr. ½
Ext. guaiac, ... gr. ⅔ —M.
For one pill.

6. *English anti-venereal drops—*

℞.—Crystallized perchloride of iron, . . 1 part.
Corrosive sublimate, ... 1 "
Distilled water, ... 1000 " —M.

Every f℥iij contains gr. ⅙ of corrosive sublimate. A medium dose, one teaspoonful.

7. *Brazilian electuary of Carneiro, containing calomel—*

℞.—Calomel, ... gr. xv
Powdered sarsaparilla root, . . . ℥vij
Powdered senna, ... ℥iijss
Simple syrup, sufficient to make an electuary.—M.

Every f℥ijss contains gr. $\frac{1}{13}$ of calomel. Full dose, ℥ijss.

8. *Ricord's pills—*

℞.—Hyrarg. protiodid. . . . . gr. xlv
Ext. lettuce, ... gr. xlv
Ext. opii, ... gr. xv
Ext. hemlock, ... ℥iss —M.
F. S. A. 60 pills.

9. *Formula of French Codex—*

℞.—Hydrarg. protiodid. . . . . gr. ¼
Ext. opii, ... gr. ⅓
Conserve of roses, ... gr. ½
Licorice root, sufficient for one pill.—M.

10. *Gibert's pills of biniodide—*

℞.—Biniodide of mercury, ... gr. i½
Iodide of potassium, ... gr. lxxv
Pulv. acacia, ... gr.vijss—M.

F. S. A. 20 pills. Two of these pills contain gr. ½ of biniodide of mercury.

11. *Syrup of Gibert—*

℞.—Biniodide of mercury, ... 1 part.
Iodide of potassium, ... 50 "
Water, ... 50 "
Simple syrup, ... 2400 " —M.

Every tablespoonful contains gr. iij¼ of biniodide.

ORIGINAL ARTICLES.

A CASE OF WORD-BLINDNESS, WITH IMPAIRMENT OF THE FACULTY OF SPACE ASSOCIATION.

BY ALLAN McLANE HAMILTON, M.D.,
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IT is rare indeed to find the sudden development of an aphasia the immediate expressions of which are recorded by the patient himself, and we are usually obliged to depend upon the statements of

the patient after his recovery, or those of persons with whom he may have been at the time of the cerebral accident. It is true that evidences of agraphia are sometimes disclosed by the letters of the patient, but I have never met with an instance which so beautifully shows the embarrassment as that I now present, the patient being a printer, who was engaged in setting up a legal brief when he was attacked. Very fortunately the copy was preserved, and I am enabled to reproduce the printed column, with all its original errors, with corrections made by the patient during his convalescence. It will be seen that the patient's difficulty began rather suddenly, and it was not until the seventieth answer was reached that he began to make mistakes, and as he advanced his confusion increased.

The case also presented various curious symptoms which I am convinced are of the utmost importance, as they show an impairment of what may be denominated the sense of fitness, or direction, and an inability to properly appreciate the relations of space.

William H. M., is 33 years old, a printer, and a man of excellent habits. He has not had syphilis and there are no evidences of cardiac or lead disease; his family history is good, his mother and father being alive and well. He is a bright, skilful workman, and has been engaged at "book-work." He made few mistakes in composition, and was looked upon as an industrious, intelligent man. According to his own story he had had domestic trouble for a short time previous to October, 1881, was worried, and lost flesh and strength. He, for several of the early days of October of that year, felt distressed about the head, and had slight vertical pain, but no vertigo. Upon the afternoon of the 10th he had a sense of impending trouble, but no idea of his real condition until the foreman of the shop called his attention to the remarkable character of his work. His "stick" contained matter that was full of mistakes known to the craft as "doublets." In almost every line he had repeated one word several times, and many others were transposed. In other places the types were upside down. He could not correct his mistakes, but made fresh blunders. At half-past five he still felt badly, and was obliged to stop work. He went to a neighboring eating-house, where he had frequently dined, and though the door-knob was large and easily reached, he had considerable difficulty in finding it. After entering the place he staggered and could walk only with difficulty, and dragged his right foot. He could not ask for what he wanted, although the bill of fare was before him, and he was considered drunk. He managed to leave the place, and went home; his right leg remained numb and weak, and he fell frequently. He remembered that while walking he was inclined to proceed in a semicircular direction, mainly toward the right, and his face was turned to that side. He next became unconscious and remembered nothing until next morning, when he was found by persons who had broken into his room. He heard all questions, but could not reply. He could move his right leg feebly, as well as his arm. He was next taken to the Chamber Street Hospital, where he remained for two days. So far he could not speak, but within a month began to talk, but could not read. He could repeat words, however, after another person.

I first saw the patient about the end of February, 1882. He was a man of spare build, rather poorly nourished, and had an annoying cough. He presented a poorly marked paresis of the entire right side, but there was very slight clumsiness in his gait. The dynamometer showed that he could force the index about twenty degrees further around on the left side, and his hand-grasp was stronger on this side. The right angle of the mouth was lower than the left, and there were transitory fibrillary tremors of the facial muscles. No lead-line was to be found, and there was no marked extensor paralysis—he being able with his hands upon the table to lift a considerable weight (a pound and a half) placed upon the dorsal surface of the fingers. Tactile sensibility and temperature were diminished on the right side. He had occasional frontal headaches. The left pupil was very slightly dilated; there was no diplopia. He had control over his tongue, and there was no deviation of the uvula, or irregularity of fauces. The reflexes were all diminished on both sides. There were no darting or stabbing pains. There was no cumulative tremor when a cup or glass was carried to his mouth. The functions of the pelvic organs were unaffected. Specific gravity of urine 1020; normal. Heart and lungs healthy, with exception of slight bronchitis. Shortly after his seizure his right arm would often be spasmodically drawn across the chest, and at the same time there would be slow spastic flexion of the leg. These seizures were often repeated and of short duration. An ophthalmoscopic examination was made which revealed inflammatory changes in the vicinity of the macula of right eye. In the left large patches of retino-choroidal atrophy were found. Both optic disks were atrophic.

The patient was emotional, and sometimes cried quite easily. He was able to converse intelligently, and memory was apparently unimpaired, and he had had no hallucinations or delusions. The interesting feature of his disease was shown when he attempted to read. He did so with great difficulty, going over the ground slowly and referring to previous words whose images he seemed to have retained. He read substituted words which in length and form resembled in some degree those of the printed matter; for instance, *New Haven* for *New Hampshire; situate* for *stated; continue* for *countersign; desirious* for *declares; Alderman* for *Anderson*, etc.; but with proper names he had the greatest difficulty: *George W. Hunt*, a name printed in the paper I asked him to read, was rendered *John H. Hunt*, and he made several attempts and finally gave up in disgust. He prefixed unnecessary articles to whatever words he was asked to read. He knew the denomination of coins from their size and color, but could not add them. Though his trade is one that should make him expert in estimating distances, he could not when asked to make a line of certain length approximate the true space. He always fell short of the required distance. A line three-eighths of an inch in length was said to

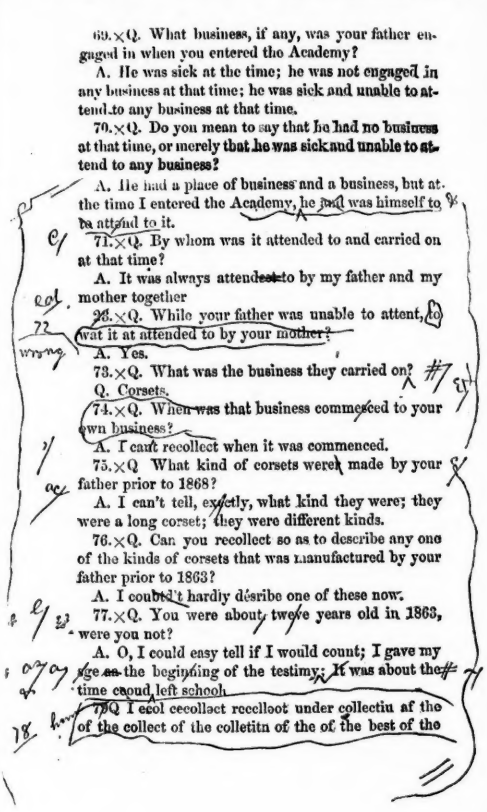
represent half an inch, and three-fourths of an inch, one inch. He had no idea of adjustment. When told to place his index-finger on the figure twelve on the dial of my watch he could not do so readily; and when told to find a point midway between twelve and six, he selected four. It must be remembered that in this case there were no changes in the muscles of the eyeballs, no diplopia or hemiopia; and I looked for these symptoms carefully. He repeated his mistake over and over when repeated tests were tried. Upon more than one occasion he made singular blunders in the location of objects. One of his duties was to place the knives and forks at the patients' plates. He once or twice placed two forks or two knives at the same plate. At other times he placed the knife and fork at one plate with the points reversed, while at other plates they were properly arranged. When his attention was called to these things he always expressed great surprise or annoyance, but invariably repeated the mistakes when he next attempted the act.

By accident a very curious mental condition was discovered—a loss of appreciation of direction or space by association. As a rule, the normal individual, when aware of the direction of one point of the compass, is able to designate the others. If he is placed with his face to the North, he knows that the East is on his right hand, and the West on the left, and the South behind him. In this patient the case was different, and both Dr. O'Brien and myself repeatedly tested this lost faculty. It made no difference how he was placed, for even with the knowledge of one point, he was apt to transpose all the others. He knew which was his right hand, and which was his left, but could not associate them with the direction. Even when three of them were properly designated after prompting, he would be apt to reapply a term already used to the fourth. This blunder was not the result of ignorance; he had a fair knowledge of geography, he was not insane, and his memory of recent affairs was unusually good. There was some loss of taste and smell.

This man slowly improved, and was discharged with no trace of asemasia, but with slight weakness of the right side. Before he left the hospital he presented us with the appended slip which he had a few days before corrected.

I related this case to the members of the Section in Practice of Medicine of the New York Academy of Medicine, and my apology for referring to it again is the production of the proof-sheet, which gives the case greater interest than its bare recital. Dr. Seguin at that time said that he had himself seen several cases in which the peculiar loss of the faculty of location had been a feature, and in one case the patient, who, by the way, had no agraphia, was very apt to turn things the wrong way or upside down. The patient, when he attempted writing, would turn the pencil around two or three times, and would invariably stop with the pointed end up.

I have noticed this peculiar symptom in other cases. In one—that of Dr. Allin—where there was word-deafness, and a lesion of the occipital convolution on the left side, the patient was very liable to reverse things. Dr. Ball, who described the case, says: "The only exception to this fact (the spacial relation of objects,) was a singular symptom which annoyed him for several months, viz., a



69.×Q. What business, if any, was your father engaged in when you entered the Academy?

A. He was sick at the time; he was not engaged in any business at that time; he was sick and unable to attend to any business at that time.

70.×Q. Do you mean to say that he had no business at that time, or merely that he was sick and unable to attend to any business?

A. He had a place of business and a business, but at the time I entered the Academy, he and was himself to be attend to it.

71.×Q. By whom was it attended to and carried on at that time?

A. It was always attended to by my father and my mother together

72.×Q. While your father was unable to attent, to wat it at attended to by your mother?

A. Yes.

73.×Q. What was the business they carried on?

Q. Corsets.

74.×Q. When was that business commenced to your own business?

A. I cant recollect when it was commenced.

75.×Q What kind of corsets were made by your father prior to 1868?

A. I can't tell, exactly, what kind they were; they were a long corset; they were different kinds.

76.×Q. Can you recollect so as to describe any one of the kinds of corsets that was manufactured by your father prior to 1863?

A. I coubd't hardly desribe one of these now.

77.×Q. You were about twelve years old in 1863, were you not?

A. O, I could easy tell if I would count; I gave my age as the beginning of the testimy; It was about the time caoud left school

78.Q I ecol cecollect recelloot under collectiu af the of the collect of the colletitn of the of the best of the

tendency to reverse the natural position of objects which he handled, such as table-knives, spoons, pencils, canes, etc. He immediately recognized his mistake, however, and corrected it, but always spoke of the inclination as irresistible." Dr. Seguin, in commenting upon this case, was disposed to account for the patient's trouble as an impairment of muscular sense, and he admits that he has never met with such a condition before. "If he did not use his eyes in prehending objects with his right hand, he would find that he had seized them by the wrong end. He sometimes found himself standing with the head of his cane on the ground and its point in his hand. Frequently, in my presence, he essayed to grasp a pen or pencil with his head turned away, and repeatedly he found himself holding the object by the wrong end, and after this turning it over three or four times to get its outlines." I have seen another case in which the same difficulty existed, the patient taking his cane by the wrong end, and he often turned his latch-key, endeavoring to insert the wrong end in the key-hole. He *always* buttoned his clothing improperly

—getting the buttons in the wrong holes. In this case there was no apparent word-blindness or deafness. The patient was slightly paretic on the right side, there was an exaggerated knee-jerk upon that side, and other indications of a slow arterial degeneration, and a lesion probably in the cortex.

The lost sense of direction and localization could hardly be described under the head of *apraxia*—a term which Kussmaul applied to a state in which "the memory for the uses of things is lost as well as the understanding for the signs by which the things are expressed."

PROF. CARL BRAUN'S ANTISEPTIC OBSTETRICAL METHODS.

BY W. W. JAGGARD, M.D.,
OF CHICAGO, ILL.

PROF. CARL BRAUN deserves a prominent place among the great men who have aided the development of antiseptic methods in obstetrics. Although no micrococcus, bacillus, or spirillum owes its name to his researches, antiseptic methods were practised with critical exactness in the Vienna Lying-in Hospital before the discoveries of Weber, Billroth, Pasteur, Schwann, Koch, and Lister were made known.

Boër, Braun's immediate predecessor, Smellie's pupil, imbued with English obstetrical ideas—at marked variance with Continental doctrines—effected a partial substitution of German by English methods in the Vienna Lying-in Hospital, which resulted in the rejection of obsolete instruments, cumbersome obstetrical beds, chairs, tables, and pillows, the heritage of previous centuries.

From March, 1849, to September, 1853, Braun acted as sole assistant in the clinic, assuming his present position in 1856. Owing to the precedent established by Boër, and to Braun's individual convictions, English notions in obstetrics have flourished in Austrian soil, and to-day there exists a remarkable identity of obstetrical doctrines in Vienna and the United Kingdom, presenting a striking contrast to the teachings of Germany, France, and America.

Endowed with a philosophical intellect, developed by broad, profound, critical study and a fabulous experience of thirty-four years of uninterrupted labor in the largest existing obstetrical hospital, Braun has made invaluable contributions to every department of obstetrical science.

It is the object of this paper to sketch briefly one of these contributions: Vienna Antiseptic Obstetrical Methods.

I. *Hospital Ventilation.* Ten wards of the so-called new wing of the Vienna General Hospital have been used, *without interruption*, from 1834 to the present time, for the practical instruction of physicians in obstetrics. In 1873 the obstetrical wards were divided into three departments. The first and second clinics, under the control of Profs. Carl Braun and Josef Späth, respectively, were devoted to the practical instruction of physicians, while the third clinic was assigned to Prof. Gustav Braun for the education of midwives. In each clinic one ward, termed the lying-in chamber, containing eighteen or twenty beds, is set apart for parturient women, while pregnant and puerperal patients occupy the remaining rooms. The reception of women in labor alternates, every twelve hours, between the three clinics, so that once in three days there is an interval, when the beds of each lying-in chamber have either no occupants at all or a few accidental cases coming from the "pregnant" wards. This period of time is technically termed "empty day," and exercises an important function.

The paramount importance of perfect ventilation received immediate recognition upon Braun's accession to the control of the hospital.

Profs. Braun,[1] Späth, and Böhm devised, in 1860, and carried into execution in 1863, a system of hospital ventilation and heating, which has continued, with few modifications, in effective operation for twenty years. This system consists essentially of a large furnace, constructed in each ward, and a system of air-conduits, which can be used for change of air, with or without heat. The furnaces draw well, heat the air streaming into them to 40–80° C., and spread through all the wards a very agreeable, lasting, refreshing, *odorless* warmth; they heat great quantities of air, 80–200 cubic metres per hour and individual, of cold, fresh air in severest weather of −20° C.; preserve a constant temperature of +16–20° C.; give eight times the change of air obtained by earlier methods; save twenty-five per cent. in money in comparison with former modes, and approximate the results of the best modern centralization methods by steam or hot water.

Simple anemometrical indicators are placed in the vertical air-tubes to determine the direction and velocity of air-currents, and to regulate the register of the valves in the conduits of the entering and departing air.

Drying and warming chambers for heating linen to 100° C., are connected with small furnaces in each ante-room. Each ward is thus heated and ventilated separately, while the excess of caloric is utilized in drying and heating linen. Water-closets of an approved English model are connected with every ward.

Owing to the order of receiving women in labor, the lying-in chamber is vacated every third day, the large windows upon both sides of the room are thrown open, and every article of furniture or apparel is abundantly aired.

Pettenkofer's precept, that each individual requires, hourly, a minimal allowance of sixty cubic metres of fresh air, meets with practical recognition in this method of ventilation. Braun says upon the subject of hospital ventilation (*Gynäkologie*, p. 884):

"I have arrived through practical observation at the recognition of the fact, that the rapid and effective prevention of putrefaction by means of generous and

[1] Braun's communication, Medizin. Jahrbüch. der Gesellschaft der Aertze in Wien, 1874.

adequate ventilation, is to be regarded as a good prophylactic rule against puerperal fever; that not the greater number of puerperal women who are annually cared for in a hospital, and not the greater number of puerperal women in one room, but the insufficient change of air in a cell for one individual in the smallest hospital, is to be regarded as the important factor in the spread of puerperal fever; that puerperal women, therefore, in order to be effectually guarded against puerperal fever, must be isolated, not by insulated houses and gardens, not by stone walls, but by the continuous conveyance of large quantities of fresh, pure, warm air by means of a cheap, practicable, easily executed method."

The Braun-Späth-Böhm system of ventilation, in comparison with other modes, has the advantage of cheapness of construction and operation; it is peculiarly adapted to old buildings, and in respects of simplicity, adequacy, durability, ease of operation, answers to the highest demands of hygiology. This system of ventilation is now in active operation in the General and Rudolph's Hospitals in Vienna, in the Prague Lying-in Hospital, and in many foreign institutions of similar character.

Recently the administration of the obstetrical department has been separated from that of the General Hospital, and special laundries have been established. The wooden bedsteads have been replaced by iron frames, and the straw ticks have been substituted by iron wire mattresses. Each pregnant, parturient, or puerperal woman receives, as her bed furniture, woollen blankets, clean linen sheets, a rubber blanket, and a pillow filled with horse-hair. Separate bath-tubs and water-closets are assigned to the patients according as they are pregnant, parturient, or puerperal. Pure mountain water is supplied in abundance to every ward. Blankets, and woollen articles of clothing are disinfected in a large, walled-in chamber, by means of superheated air. Finally, there is an annual house-cleaning and white-washing, of more than New England thoroughness.

II. *Treatment during last weeks of Pregnancy.* Upon admission into the hospital, healthy pregnant women are separated from those who have an abnormal temperature, or present other pathological appearances. During the period prior to confinement—a space of four or six weeks—the pregnant woman is compelled to take baths at regular intervals, and her axillary temperature is carefully noted. Her last act before entering the lying-in chamber, is to take a warm bath, in which soap is vigorously applied.

III. *Treatment during Parturition.* Upon entering into the lying-in chamber in the first stage of labor, the woman is put to bed, and her axillary temperature noted in the protocol. If her temperature is pathological, she is transferred at once to another ward. If her temperature is normal, that is, at or below 38° C., she is examined by the attending physician or midwife. Vaginal examination is permitted an individual upon the conditions: (1) that for the space of twenty-four hours preceding, he has not been within the sphere of contagion of any zymotic disease, and that his hands have not come in contact with any wound or cadaver; (2) that his hands are absolutely clean. The importance of the second condition is difficult of exaggeration in a land like Austria, where the minimal consumption of soap and water is attained.

After a vigorous application of soap and nail-brush in a two and a half per cent. solution of carbolic acid, the hands are dipped into a solution of potassium permanganate (twelve grammes to one kilogramme of distilled water), until they are colored a deep brown; they are then transferred to a solution of concentrated commercial hydrochloric acid in water (sixty-five grammes to four hundred grammes of distilled water), which removes the stain of the chameleon mineral and all organic matter still adherent. They are wiped dry upon large linen sheets, which are constantly renewed.

Before making the examination it is customary to dip the exploring finger into a solution of hydrochloric acid in glycerine (two grammes of concentrated, commercial hydrochloric acid in four hundred grammes of glycerine).

During parturition it is usual to douche from time to time the external genitals with some antiseptic fluid, such as a one-fifth per cent. solution of salicylic acid, a one-tenth per cent. solution of thymol, or a two per cent. solution of carbolic acid. In every case of protracted labor, after rupture of the bag of membranes, sitz baths at regular intervals are enjoined.

When operative procedure is indicated, the vulva and vagina are thoroughly irrigated with a two per cent. solution of carbolic acid before the introduction of any instrument. All instruments, including uterine tubes and catheters, are kept submerged in a two and a half per cent. solution of carbolic acid before use. When the use of instruments has necessitated the invasion of the uterine cavity, it is thoroughly irrigated with a thymol solution after separation of the placenta. Apart from the invasion of the uterine cavity by instruments, there are other indications for its irrigation, which will be discussed later.

The hard rubber tube introduced into the cavity of the uterus is about twenty-five centimetres in length, three centimetres in circumference, and terminates in an olive. The irrigator is the one designed by Leiter, and is simply a large, conical glass flask.

Extreme attention is paid to the exclusion of air from the uterine cavity during the process of irrigation. The disinfectant solution is allowed to displace all air within the pipe of the irrigator and the uterine tube before the latter is introduced within the cavity of the uterus. During the irrigation one hand performs gentle friction upon the fundus, through the abdominal parietes. After the completion of the irrigation, a *bacillus*, containing five grammes of iodoform, is introduced within the uterine cavity; an equal quantity is usually placed within the vagina.

Perineal ruptures and episiotomy wounds are carefully cleansed and immediately united by *serres-fines* or sutures. Contused and lacerated wounds of the vagina are painted over with neutralized tincture of sesquichloride of iron, acetic clay, tincture of iodine, Goulard's extract, thymol, or carbolic oil.

All wound surfaces are finally dusted over with iodoform powder. Incidental allusion to the subject of axillary temperature has already been made, but it demands, at this stage, especial notice. The axillary temperature of each patient is taken and recorded at intervals of three hours, during the entire period of parturition. If the temperature becomes abnormally high, the patient is at once isolated. This rule is enforced with rigorous exactness in each department of pregnant, parturient, and puerperal women.

Winckel, of Dresden, first directed attention to the importance of tokothermometry, and proved that skin-temperature was of more constant diagnostic and prognostic moment than pulse or respiration. Braun has abundantly corroborated Winckel's researches, and the clinical thermometer plays a very active part in the first obstetrical department.

In a recent lecture upon this subject Braun said:

"I am perfectly convinced that every parturient woman in a febrile condition on account of endometritis, with or without *tympanites uteri*, possesses the capability of infecting, during her stay in the room, as the result of which she can become the source of extreme danger to her neighbors; whether the transport of the pernicious influence is effected by the examining finger or by the polluted air penetrating the vagina, I should like to leave undecided. I, myself, hold that the one as well as the other mode of transport is possible, and after exploration or operation in a case of septic endometritis, even after the most careful purification and disinfection of the hands, would not venture to examine, upon the same day, a healthy, pregnant, or parturient woman."

III. *Treatment during the Puerperium.* Immediately after labor the soiled linen is removed, and the patient enveloped in linen sheets heated to 100° C. After the patient has recovered from the fatigue of labor, by a brief period of sleep, the midwife cleanses, with a bit of absorbent cotton, the skin of thighs, abdomen, and vulva, and wipes the surfaces dry with a clean, warm towel. Sponges have been for years banished from the clinic. The rules for the further treatment of the puerperal condition are:

1. A rapid healing of the uterine wound is best effected by quiet, restricted diet, and absolute cleanliness. To maintain cleanliness, it is seldom necessary to inject lukewarm water into the vagina, and still more rarely are we compelled to irrigate the uterine cavity.

2. To prevent the resorption of the pus secreted by the uterine surface, it is necessary (*a*) to fill all the bloodvessels to their maximum capacity, by the exhibition of generous quantities of lukewarm, sweetened drinks, (*b*) to avoid depletion by diuretics, diaphoretics, or purgatives.

3. To lessen the danger of puerperal thrombosis, it is necessary to secure uterine contractions during the third stage of labor, and in the early hours of puerperium, even if no *post-partum* hemorrhage is threatened. This rule is especially imperative during the existence of epidemics of puerperal fever. Uterine contractions may be secured by massage of the abdomen and fundus, application of a binder, or the exhibition of ergot.

4. The lochial secretion must be regulated by complete rest in bed, absolute cleanliness, protection against cold, and careful ventilation of the room.

5. Puerperal ulcers of the genitals, caused by the irritant action of the lochial secretion upon the traumatic effects of labor, must be rendered proof against the resorption of pus, during the first eight days, by the local application of potassium permanganate, basic sesquichloride of iron, or tincture of iodine.

6. To arrest the fermentation process in the blood, or to limit its pernicious tendencies, five to fifteen grains of quinine may be exhibited daily with advantage. Axillary temperature of 39° C., pulse frequency of 100, dysphoria, constitute indications for the immediate use of the drug.

HOSPITAL NOTES.

ST. MICHAEL'S HOSPITAL, NEWARK, N. J.

(Service of DRS. WM. O'GORMAN and WM. PIERSON.)

SUBACUTE TETANUS COMPLICATING SCALDS (THIRD AND FOURTH DEGREES); RECOVERY.

Reported by ARTHUR C. DOUGHERTY, M.D.,
Surgical Clinical Assistant.

JOHN K., æt. 22; Ireland; laborer; admitted December 15, 1882. Patient is a strong, healthy man, of slight build; habits temperate.

On December 5, 1882, while on night duty at a bone-dust manufactory in this city, the patient, while endeavoring to pass between two large pans of boiling ammonia, slipped, falling partly into one of the pans. At the time of the accident the patient wore a pair of rubber boots, by means of which his feet were protected. During the ten days which intervened from the time of the accident until his admission into the hospital, the patient was treated at his home, the treatment consisting of the external application of carron oil and internal administration of morphine.

Admitted December 15th. Condition on the morning of December 16th: on the right lower extremity, halfway up the thigh, and for the same extent down the leg, patient presents a scalded surface; the burns varying from the third to the fourth degrees. Also a smaller scalded surface of the third degree in the right inguinal region, and severe scalds of third and fourth degrees on right and left arms and forearms. The sloughs were beginning to separate. The patient's tongue was brown and dry, pulse 124 and feeble, and during the preceding night he had been so delirious as to require to be strapped in bed. He was ordered liq. morph. sulph., U. S., ʒij p. r. n., and the liberal administration of milk punch. The local measures were emollient and protective. From that time the patient's condition continued to improve, his temperature gradually falling and his pulse becoming slower and stronger, until the morning of December 23d (the eighteenth day after the accident), when the patient, after having passed a comfortable night, noticed a slight stiffness of the jaws. He said that he remembered having had a slight jerking o his jaws when about half asleep. This symptom,

however, was so trivial that he attributed it to an uncomfortable position of his neck in bed. He had "no sore throat," and no stiffness of the post-cervical muscles. Tetanus being suspected, the patient was ordered large doses of potassium bromide and chloral hydrate. On the following day the jaws were almost locked, and in addition he was ordered pulv. morphiæ sulph., one-fourth of a grain every two hours. As yet the act of swallowing occasioned no clonic spasm, and the nourishment was introduced through the aperture left by an extracted tooth. His temperature and pulse now both began to rise, his tongue again to become dry and brown, although his rest at night appears to have been pretty fair. His temperature continued to rise for four days, at the end of which time it again began to sink toward the normal.

His condition was now as follows: jaws firmly locked, and slight tension of left sterno-mastoid, masseter, and rectus abdominis muscles; pulse 121 and feeble, and tongue dry. The tonic spasms now continued to become more marked, and at the end of six days a condition of pleurosthotonos toward the left side was well developed. The patient was now ordered morph. sulph., gr. j every hour in suppository. During this time the patient continued hopeful, and during the day his mind was clear. Clonic spasms had now and then been present, but until the eleventh day from the beginning of the attack they did not form a prominent symptom. They then became more frequent, being brought on by the act of swallowing, or by touching the patient. In this condition the patient continued for two days, when the clonic spasms began to come on less frequently, and the tonic spasms to relax. During this time the patient obtained some sleep at night, and was able to take nourishment in small quantities. On the seventeenth day the contracted muscles began appreciably to relax, except those of the jaws, which, ten days later, had only relaxed so as to allow the patient to open his mouth one-half an inch. He was now getting about gr. vj of morphine during the twenty-four hours, and in spite of the large amount of the drug he had taken at different times, he did not once exhibit the signs of opium narcosis. He now continued to improve until his discharge, the clonic spasms first disappearing, and after these the tonic spasm, which, however, persisted in slight degree for two weeks or more after the disappearance of the former. As the patient improved, bromide of potassium and chloral were substituted for the morphine. He now ate and slept well, having a famous appetite, and on January 31st (thirty-nine days from the beginning of the attack), as I made my rounds of the wards, the patient was dressed and eating his dinner, in a chair. On February 9th the patient was discharged, cured, his being the fourth case of recovery from tetanus in the history of the hospital. His burns had healed, and attempts had been made to lessen cicatricial contraction as much as possible by passive motion.

Remarks.—This case is interesting from the length of time (eighteen days) which intervened between the receipt of the injury and the first appearance of the lock-jaw, at which time the burns were granulating nicely, and the patient's general condition daily improving. That, throughout the attack, with the exception of two days, the tonic spasms predominated over the clonic, and, finally, as an example of the most surprising vital endurance, for the burns themselves were of such severity as apparently to preclude any but the most unfavorable prognosis. This patient noticed, as he began the second time to improve and to regain the power of swallowing, that hot liquids (as warm milk) taken by the mouth, had a greater tendency to bring on muscular twitchings than the same liquids in a cold state.

MEDICAL PROGRESS.

AN UNDESCRIBED DISEASE OF THE FALLOPIAN TUBES.—At the meeting of the Obstetrical Society of London, on November 7th, MR. LAWSON TAIT contributed the following case. The patient, aged thirty-six, suffered from constant pelvic pain, aggravated during menstruation and after sexual intercourse, and was much emaciated and haggard. She had had much fruitless medical treatment. There were no physical signs of pelvic disease, except great tenderness. Mr. Tait made an exploratory incision, and found the fimbriæ of the tubes adherent by curious little nodules like millet-seeds. He therefore removed the uterine appendages, with the result of completely restoring the patient to health. The nodules had been examined by Mr. F. S. Eve, who reported that he could offer no opinion as to their origin or nature, but that they were neither cartilage nor bone. —*Med. Times and Gaz.*, Dec. 1, 1883.

RESECTION OF THE ŒSOPHAGUS.—This operation was performed on September 23d, at the Ospitale S. Giovanni in Turin, for epithelioma.

The patient was a woman æt. 45. One year ago she began to have symptoms of stenosis of the œsophagus, and when she came to the hospital she was much emaciated from an inability to take food. The stenosis was so great that no œsophageal sound could be passed. DR. NOVARO diagnosticated epithelioma of the œsophagus, and performed Czerny's operation for resection. Having cut through the superficial tissues and exposed the œsophagus, a guide was passed into the mouth, and the seat and extent of the tumor easily made out. Having then separated the œsophagus from the trachea, and fixed it with silk stitches, he made a transverse resection about four-fifths of an inch below the lower limit of the tumor. The upper portion to be resected was two and four-fifths inches long, and involved a portion of the pharyngeal wall. It was also necessary to remove the posterior arytenoid muscles. Symptoms of asphyxia coming on, tracheotomy was performed. Through the opening in the gullet an œsophageal sound was slipped in, and after a week, was placed permanently through the mouth. A month after the operation there was an œsophageal fistula one inch and two-tenths long, for which a plastic operation was performed by Hüter's method for tracheal fistula. The tracheal tube and œsophageal sound have not been removed, and so far the operation has been successful.—*Gaz. degli Ospitali*, December 9, 1883.

GLYCERINE IN ACUTE FEVERS.—PROFESSOR SEMMOLA calls attention to the use of glycerine as an aliment of economy in the treatment of grave acute febrile processes, and especially in typhoid fever. Alcoholic drinks, he says, have only a pretended antiseptic action, which has deceived many eminent practitioners. In his

opinion, alcohol produces a toxic action very much as do other antipyretics—veratrine, digitalis, carbolic acid, and salicylic acid—disproving the dangerous utopian ideas of some young physicians concerning the power of carbolic and salicylic acids, etc., to cure or abort typhoid fever.

As to alcohol, on account of its exciting action on the heart and cerebrum, and its disturbing action on the digestive organs, Semmola has entirely discontinued its regular and constant use as an aliment in grave febrile processes, reserving this agent for combating threatening heart failure.

Glycerine, on account of its chemical composition, long since appeared to Semmola as a substance which might replace alcohol in these fevers, and which would give the patients a greater resistance to the action of the fevers. He uses the following formula:

℞.—Glycerine, pure, ... fʒj.
Citric or tartaric acid, . . . ʒj.
Water, ... ad. fʒxvj.—M.
S.—fʒv–viij every hour.

This solution is well borne by the patient; but sometimes, on account of its acidity, Semmola often gives it at the hours for taking milk or beef-tea. In the rare cases in which the solution is unpleasant to the patient, he replaces the acid by a few drops of oil of anise.

The principal therapeutic effect, and the only one upon which Prof. Semmola insists, consists in the quantity of urea eliminated. From an accurate observation of twenty cases of typhoid fever, he concludes that the diminution during twenty-four hours may amount to so much as ʒvij, and as a rule it is from grs. xc–c. He has proved by experiment that the glycerine is the causative agent in this diminution.—*Journal de Méd. de Paris*, December 22, 1883.

CONVALLARIA, CONVALLARIN, AND CONVALLAMARIN.—PROF. DR. E. MARAGLIANO has recently made further researches as to the action of these preparations—the watery and alcoholic extract of convallaria, and of convallarin and convallamarin—on the pulse-curve, pulse and respiration, and blood-pressure, and draws the following conclusions from his experiments:

1. The intra-arterial pressure, measured by means of Basch's apparatus, is never lowered, but is sometimes raised as much as twenty-five or thirty millimetres.

2. The pulse-curve is never depressed in the ascending lines, but a marked rise is sometimes observed.

3. The frequency of the pulse and respiration is generally diminished.

Other experiments as to the action of the different preparations of convallaria gave the following results:

1. The urinary secretion was often increased, sometimes very markedly. Convallamarin acted more powerfully, while convallarin and the extracts were less active.

2. The frequency of the pulse and respiration was either increased or remained unchanged.

3. The blood-pressure was not lowered; sometimes it was raised.

4. The pulse-curve was generally unchanged, though sometimes the systolic lines were higher.

5. During the treatment with convallaria preparations, no bad effects nor intolerance was observed, except a few cases of diarrhœa. Of the diseases in which the good effects of the convallaria preparations were observed, heart diseases, of which thirteen cases were observed, occupy the first place. It acted well in valvular diseases, especially of the mitral orifice, with insufficient activity of the cardiac muscle. In nine of the thirteen cases the preparations were decidedly advantageous. They increased the amount of urine, and regulated the heart's action. In many cases convallaria is preferable to digitalis. In four cases in which it failed, digitalis also failed. Convallamarin also acts most powerfully in cardiac disease.

The convallaria preparations do not give the good results in pleurisy with sero-fibrinous exudation which have been attributed to them. They are superior to digitalis, in that they produce none of the unpleasant effects of digitalis, and have not its cumulative action.—*Centralbl. f. d. med. Wissensch.*, Oct. 27, 1883.

CASTRATION IN THE FEMALE.—TAUFFER is very favorably disposed to this operation. After having reported twelve cases, he concludes:

1. With necessary precautions this operation is not very dangerous; the mortality being only ten per cent.

2. It should be done under the spray; the abdomen should be closed; drainage is only exceptionally necessary.

3. The fact that the woman is near the menopause is no contraindication, for we cannot positively say when the menses will cease.

4. It is impossible to give any rule for operating, such as Hegar's, that the ovaries should be accessible to palpation.

5. Double ovariotomy should be performed, especially when a single ovary is diseased, except in the rare cases where one of the organs must be preserved.

6. The Fallopian tubes should be removed if they are diseased in any way.

7. Hystero-epilepsy is curable by castration; and the group of symptoms known as hysteria is often attributable to ovarian disease.

8. The question as to the effect of the ligature of the large supplying vessels on uterine fibromyomata needs further consideration.

9. As to prognosis, it is probable that the menopause will not be delayed after the operation except in the cases in which inflammation has involved the neighboring organs. These inflammations retard the menopause.

10. It is desirable that the cases should be classified according to the plan suggested by Hegar.—*Ann. de Gynéc.*, December, 1883.

HYDATID OF BASE OF SKULL.—An interesting case of an obviously incomplete character was brought under the notice of the members of the Société Médicale des Hôpitaux, by M. Bucquoy, on November 23d. The subject of the disease exhibited well-marked atrophy with paralysis of the facial muscles, internal squint and anæsthesia, all on the left side of the face. There was no history of syphilis or of any other morbid antecedent. The malady had set in three years before with headache, and a tumor had made its appearance at the angle of the jaw in the beginning of the present year. Many hydatid vesicles had been ejected from the mouth. The tumor was opened by M. Bucquoy by an incision, and much

purulent fluid let out mixed with hydatid vesicles. The patient still had a fistula at the angle of the jaw (the site of the incision), from which hydatid vesicles continued to be discharged at intervals. The paralysis was persistent. M. Bucquoy thinks that the cyst involved the sphenoid bone and projected thence into the pharynx. The case itself excited some discussion. M. Dujardin-Beaumetz asked whether the hypothesis that hydatids still existed in the brain was excluded. Owing to the spastic state of the masticatory muscles, it appears that a careful examination of the pharynx was not possible. Whatever the probabilities, it is obvious that nothing short of actual inspection of all the parts concerned could be expected to clear up every point of interest in the case.—*Lancet*, December 8, 1883.

QUEBRACHO, ASPIDOSPERMIN, AND QUEBRACHIN.—MARAGLIANO gives the following as the results of his experiments on the action of these substances:

1. The alcoholic extract of quebracho, quebrachin, and aspidospermin have a diminishing action on the frequency of respiration, aspidospermin being the least powerful.

2. These substances act only when the increased frequency of respiration depends, not on affections of organic or mechanical nature, but on functional disturbances. In acute and chronic cardiac and respiratory diseases, they are of value; but they have no marked action on the frequency of respiration if this oversteps the physiological limits.

3. These substances, quebrachin and aspidospermin especially, have a decided influence on the pulse-rate, which may be diminished so much as twenty per minute.

4. The action of quebrachin and aspidospermin on the intra-arterial blood-pressure, with Basch's sphygmomanometer, is entirely negative.

5. The action of these substances, especially quebrachin and aspidospermin, is very quickly manifested: if given per orem, in from thirty to forty minutes: if hypodermatically, in from five to ten minutes. In giving the alcoholic extract no symptoms of intolerance have been observed. Sulphate and hydrochlorate of quebrachin and aspidospermin were administered in pills containing gr. ¼–jss each, the daily dose being gr. iij¼–xv.

Large doses cause gastric troubles. A medium dose is gr. vj–vijss taken internally during the day. For hypodermatic injection, quebrachin and sulphate of aspidospermin should be used, gr. ¼–jss at each injection. When this amount is completely dissolved in water it causes no local or general unpleasant results, and a diminution of the respiration- and pulse-rate is soon observed. For asthmatic attacks, quebrachin, used hypodermatically, is to be preferred; but for methodical treatment, the alcoholic extract is preferable. These preparations, then, are important additions to the physician's armamentarium. The best preparations are manufactured by Merck, of Darmstadt.—*Centralbl. f. d. med. Wissensch.*, October 27, 1883.

TREPHINING FOR SYPHILITIC EXOSTOSIS.—M. PERRIN reported this case to the Société de Chirurgie in June, 1883. The history is as follows: In 1854 a spent ball struck him on the forehead. This was followed by obstinate cephalalgia. In 1865 he contracted syphilis, and was treated with mercury; the cephalalgia persisted. In 1869, the pains in the head became more violent, and Nélaton removed five sequestra from the frontal bone, there having been a fistulous tract since 1854. In 1870, the cephalalgia reappeared, and was relieved by specific treatment. In 1875, he became very excitable, and lost his memory; had difficulty in articulating words, and there was incomplete facial paralysis of theleft side.

He entered Val-de-Grâce, when M. Perrin found a large projection in the frontal bone, having a fissure in the centre into which a stylet could be introduced, and from which pus flowed. The stylet could be carried towards the external orbital suture, and in a short time pus escaped through the nose. The symptoms became aggravated, and he was put on mercury and iodide of potassium.

M. Perrin then trephined the frontal, and found that the bone was less than three-fifths of an inch thick. Alcohol dressings were applied, and the wound rapidly healed. A month afterwards, the paralysis disappeared, and articulation was easy. A few months later, the patient was put on iodide of potassium in large doses, and mercurial frictions, since which time the health has been excellent.—*Ann. de Dermat. et Syphil.*, Nov. 1883.

GLOBULINURIA IN ACUTE BRIGHT'S DISEASE.—A case of acute nephritis is reported by WERNER, of Heidelberg, as occurring in Prof. Dusch's clinic, which is probably unique. It was that of a child, aged five years and a half, who developed symptoms of the disease after exposure to wet five days before his admission into the hospital. There was only a little œdema of the eyelids, together with signs of diffuse bronchial catarrh on admission, but general dropsy rapidly supervened, and death occurred from suppression of urine five days afterwards. What renders the case remarkable was that the urine only contained globulin, and never serum-albumen, although repeatedly examined, amongst others by Kühne. The characters of the urine were its high color, cloudiness, and moderate deposit, but no blood. Slight turbidity appeared on boiling with nitric acid, and also with acetic acid, clearing up, on excess; and after supersaturation with magnesian sulphate no precipitate was obtained in the filtrate on the addition of nitric acid. Fatty epithelial and granular casts were found. The writer points out that hitherto globulin has never been met with in urine unless in company with serum-albumen; and quotes the statement of Senator to the effect that the quantity of globulin is most in the amyloid form of renal disease, next most abundant in acute nephritis, and least in the chronic diffuse form, although much albuminuria may be present. The same author also suggested that the globulin may be derived not only from the blood, but also from the morbid changes undergone by the renal epithelium, and Herr Werner thinks his case proves the possibility of its being solely derived from the latter source. He interprets his case, then, as one in which the renal epithelium was principally affected, which speedily and widely fell into a necrotic condition, as evidenced by the tube-casts, and that this necrotic cell protoplasm was the source of the globulin. The idea is, to say the least, ingenious; and it is most unfortunate that no post-mortem examination was obtainable. It should be added that the child had previously been in good health, and had never had scarlet fever.—*Lancet*, December 8, 1883.

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THE ELECTRIC LIGHT AND GAS-LIGHT COMPARED.

THE introduction of the electric light has not only supplied a superior means of artificial illumination, but it has stirred up a competition that has resulted in great improvements in other methods of lighting. It has also directed attention to the study of the connection between lighting and hygiene, which will lead to important results.

As the introduction of gas gave an impetus to the improvement of oil lamps, so has the new illuminant—electricity, by the competition it has aroused, brought out improvements in the methods of gas-lighting which are altogether unprecedented. It is said that there is as great a difference between the light given by gas-burners recently invented and that of those which were in use ten or fifteen years ago, as now exists between the electric light and the present means of illumination by gas. And it is not too much to expect that, with improved contrivances for the most perfect combustion, and for conveying its waste products to the external air, along with means for the utilization of the temperature of combustion for ventilating purposes, and the application of the incandescent principle, gas-light will be able to compete on favorable terms, even from a hygienic standpoint, with the electric light for indoor illumination. At present, however, the incandescent light *in vacuo* is hygienically beyond comparison with the ordinary gas-light.

The heat produced by the resistance of the delicate filament of carbon used in this form of the electric light is hardly appreciable, and is therefore not sufficient to have any effect upon the gases of the atmosphere. The light being *in vacuo*, there can be no possible vitiation of the air. Another advantage is its almost perfect accordance with the laws of visual hygiene, in that it permits of the selection of the different colors the same as by daylight.

The source of light in the new illuminant depends on the "energy of current electricity." With the older illuminants, it depends on the "energy of chemical affinity." Coal-gas has a great affinity for oxygen, and will ignite in its presence if the temperature be high enough. Its combustion cannot take place without the production of considerable heat, and the abstraction from the atmosphere of a large amount of oxygen. Moreover, the process is attended with the production of deleterious substances, the result of chemical combination.

The development of heat by the combustion of ordinary illuminating gas is not so much an objection, as this may be utilized for ventilating purposes; but the abstraction from the air of a large proportion of oxygen—the life-supporting element of the atmosphere—and the production of deleterious compounds, are the features which cause gas-light, as ordinarily used, to be injurious to health. According to Mr. Slater, every cubic foot of ordinary coal-gas, giving fifteen candles for five cubic feet per hour, requires for its perfect combustion 1.17 cubic feet of oxygen, so that in a room lighted for two hours by three good burners, the gas would require 35.1 cubic feet of oxygen.

The products of coal-gas combustion are mainly aqueous vapor, carbon monoxide, carbon dioxide, and sulphuric acid. Sulphuric acid is one of the products of oxidation of the carbon disulphide, traces of which are not uncommonly found in ordinary gas. This constituent makes its presence known by the damage it causes to plate, pictures, etc. When gas is imperfectly oxidized, a considerable quantity of carbonic oxide escapes into the air and forms a dangerous impurity. Carbon dioxide is the chief constituent of the products of gaseous combustion. The amount of this gas in normal air is, on an average, 0.04 per cent.; it frequently varies from this mean. Now it is evident that this standard cannot be maintained in a confined space where the combustion of gas takes place, unless special means are used for the removal of the products of such combustion and the fresh supply of pure air.

The freedom of the incandescent electric light from these serious disadvantages gives it a superiority over any means of artificial illumination hitherto invented, and causes it to rank as the hygienic light of the future. The convenience of gas as an illuminant is a strong influence in its favor, but this claim cannot be expected to be long withheld from its new rival. Attention will then, more than ever, be directed to the perfection of appliances for the

entire removal of the harmful products of combustion, the supply of fresh air to counterbalance the loss of oxygen, and to the improvement of the quality of the light by some such invention as the Siemens, Grimston, or Lewis incandescent gas-burner, so as to avoid the disadvantages of the system of coal-gas illumination, and at the same time to afford the maximum illuminating power with a quality every way satisfactory.

With regard to the electric arc lights, it is stated that, unless enclosed in air-tight globes, they produce nitrogen oxides from a rearrangement of the gaseous constituents of the atmosphere through the intense heat of the voltaic arc. Carbon dioxide is also said to be produced in the same way. The varying densities of the light from the heterogeneous character of the carbons cause muscular fatigue of the eyes and also render retinal images indistinct. From a sanitary standpoint this light cannot be said to be so satisfactory for indoor illumination as the incandescent light *in vacuo*.

THE PRACTICAL ASPECT OF THE BACILLUS TUBERCULOSIS.

THE article by PROF. FLINT, SR., "On the Pathological and Practical Relations of the Doctrine of the Bacillus Tuberculosis," published in our last issue, is worthy of careful perusal by all readers. Dr. Flint's high position in connection with American medicine, as well as his long association with pulmonary diseases, make his opinion more than commonly valuable on this important subject.

Dr. Flint unequivocally accepts the doctrine that a micro-organism is one of the factors in the production of tubercular phthisis, that it is essential, and that there is no tubercle without it; while, on the other hand, he does not consider it alone sufficient to produce the disease. With it must be associated the second factor, predisposition, either hereditary or acquired. Whence it follows, too, that tuberculosis is an infectious disease in the sense in which this term is accepted to-day, viz., a disease dependent on special causative agents which, under favorable circumstances, are capable of multiplying indefinitely, either within or without the body. In that the bacillus requires a soil favorable to its development, a condition furnished by the predisposition, tuberculosis is not different from other infectious diseases.

Another conclusion accepted by Dr. Flint is that pulmonary phthisis, which we now again regard as a synonym for pulmonary tuberculosis, is primarily a local disease, the initial morbid process taking place in the lungs and being due to the presence of the parasite. The fact that no other infectious disease is local, even primarily, in the sense that tuberculosis is local, seems, to Dr. Flint, in no way to militate against its infectiousness. We do not know that it ought to be considered as doing so, but the fact itself should not be overlooked.

That clinical statistics fail to show that tuberculosis in man is contagious, is owing to the fact that in most cases the concurrent coöperating conditions embraced under the term predisposition are wanting. This view is further sustained by the fact that different animals differ widely in the susceptibility to tubercle inoculation, cats and dogs possessing comparative immunity, as compared with rabbits.

In the diagnosis of tubercular phthisis, Dr. Flint assigns the bacillus a high value, believing that if repeated, sufficiently careful examinations show its presence, phthisis is present, while its absence excludes the possibility of the disease.

The application of these new doctrines to the prevention and cure of phthisis, is admitted to have been thus far without practical results. The preventive measures now available are those available before the bacillus was known, and no measures have been discovered which can destroy the parasite without destroying the patient.

We hope the publication of Dr. Flint's paper will have the effect of attracting the attention of clinicians on this side of the Atlantic to this important subject. For, as yet, they have done very little for us in this direction. The profession in this country are sometimes even too ready to avail themselves of practical suggestions in the direction either of operations or therapeutics, involving little thought and labor, but they are still too unwilling to devote the time and labor required to work out such results. Dr. Flint's evident painstaking care in the preparation of his paper, notwithstanding his numerous engagements at this season, is certainly an example to us.

SHORTENING THE DURATION OF PREGNANCY.

CONTRIBUTIONS to our medical literature are not unseldom made with the design of showing how the first stage of natural labor can be shortened, and the method almost invariably advised is dilating the os uteri by the fingers. It is true this method has been strongly condemned by many great obstetricians from Baudelocque to Barnes, the latter not many years ago speaking of it as "old and bad;" nevertheless it undergoes frequent revivals, its advocates presenting it if not as a new, at least as a very useful interference or assistance in normal labor. Undoubtedly any means that will lessen the suffering and avert the perils of childbirth ought to be received with favor, and while we do not propose to discuss this method, or any other having directly its design, at present, we wish to consider a more

important subject, viz., lessening the term of human pregnancy.

It must strike the thoughtful as strange that while science has done so much to relieve feathered domestic animals of the weariness, the emaciation, and the exhaustion of a few weeks' incubation, accomplishing by artificial heat in a day or two that which the clucking mother cannot do in less than three weeks, nothing has been done to shorten the long period of nine months during which the human mother carries on the internal incubation of her egg. Certainly every one will admit that it is desirable to relieve women in pregnancy of all the inconveniences and dangers their state brings. Now it must be conceded that usually these inconveniences and dangers are greatest in the last two months; and, like the western farmer who, observing that the squirrels only ate the corn in the outside rows, concluded he could save his field from their ravages by having no outside rows, so do not let the pregnancy have any last two months in which such dire evils may come.

It must also be obvious to the observant practitioner that childbearing is not the simple and safe process it was when the race was young. It is quite probable that in the intellectual development of mankind the head is bigger than heads once were, the maternal passage is not large enough for the passenger, and so uterine and vulvar orifices tear instead of stretch as they did in the good old times. Whether these lacerations, which furnish so important a field for the busy skill of those most accomplished and polished members of the medical fraternity known as gynecologists, are thus explained, or whether they result from an inferior stuff, a sort of somatic shoddy, put into woman's sexual apparatus, deficient in strength and elasticity, or from some other cause, certainly it is very sad to think that a woman cannot have a baby without subsequently in many cases having to be put in a repair-shop for a few weeks, or even months. No wonder many women shrink from childbearing, avoid it *per fas et nefas*, when babies cost so much. Formerly a midwife did all the work, and her fee was a trifle; but now the obstetrician attends in the labor, and after the ordinary period of puerperal convalescence, in one case of five or ten, is succeeded by the gynecologist. Again, adopting the wise apothegm of the late President Lincoln, a small debt is more easily paid than a large debt, will not a small baby be born sooner than a large one, and thus not only the first, but also the second stage of labor be shortened?

We think by these arguments we have clearly shown the desirability of shortening the duration of pregnancy, and the great blessings such abridgment would give.

It remains for us to consider some of the means that may be used for the accomplishment of this end. Why pregnancy ends at nine months is still an unanswered question, but we hope that the suggestions we make may lead to the final solution, for by trying various ways to bring on labor, we will find some one which is always certain, safest, and best, and, therefore, that may be accepted as Nature's way. Let us suppose, for example, that fatty degeneration of the decidua renders the ovum a foreign body, and thus the excitant of uterine contractions. Accepting this theory, we may give the woman arsenic or other steatogenous medicine, beginning a few weeks before we wish labor to occur. Or again, the Tyler Smith theory, that labor comes on from ovarian influence, is quite as probable as the one just mentioned; here our task is very simple, and its result ought to be certain: we depend altogether upon faradization of the ovaries, and if we continue this daily for a sufficient length of time, labor will surely come on. But possibly the exciting cause of labor is the excessive distention of the uterus. In these days, when resection of the stomach and pericardial paracentesis are so successfully done, there ought to be no hesitation as to introducing a canula into the fœtal sac, and pumping in a sufficient quantity of warm water to excite uterine action; it is possible that labor could be thus induced within a few hours, and as the most important means of this induction is a syringe, the peculiar fitness of Uncle Toby's question, "Are children born with a squirt?" would be plain. And thus we might show that there is not a single theory of the determining cause of labor which cannot be illustrated by artificial means.

But some philoprogenitive friend may ask whether these babies thus coming at seven months will not be so feeble that they cannot live. Most assuredly they can and will live, for that admirable invention, the *couveuse*, which, of course, is not to be confounded with a caboose, though each is remarkable for its warmth, is just adapted to such infants. Read Auvard's paper in the October number of the *Archives of Tocologie*, an abstract of which appeared in last week's issue of THE NEWS, and it will be seen that babies considerably under seven months get on very well by the help of the *couveuse*. Apart from any modern facts showing that seven months' babies do live and grow to healthy maturity, we have, in the nineteenth book of the *Iliad*, the case of Sthenelus's wife, "scarce seven moons gone," lacking, therefore, somewhat less than three lunar months the completion of pregnancy, who gave birth to a healthy son, and that son was especially favored according to Jupiter's promise.

Of course, we do not expect our suggestion as to shortening the period of pregnancy to be at

once accepted; an important idea of this kind can only gradually make its way. But when the practice is adopted, let there be no dispute as to with whom and when it originated. Alas! we do not know who first practised digital dilatation for the shortening of the first stage of labor any more than we know what song the Syrens sang, but all must know the importance of the suggestion now made by THE NEWS.

EMBOLISM OF THE SUPERIOR MESENTERIC ARTERY—PERFORATION OF THE INTESTINE.

AN interesting case of this rare accident is communicated by CONTI to the *Gazetta degli Ospitali*, 1883, No. 57. A man sixty-five years old was admitted to hospital with cerebro-spinal meningitis. Recovering from this disease, he remained two years on account of general atheroma of the blood-vessels. On January 19th, he became suddenly ill and died with symptoms of acute peritonitis. The autopsy revealed thickening of the pia mater of the convexity, moderate hypertrophy of the left heart, extensive atheromatous endarteritis, with numerous lateral thrombi of the ascending and descending aorta. The peritoneum was dotted with numerous hemorrhages, and in the middle third of the transverse colon was found a round opening, 0.4 of an inch in diameter, surrounded by a hemorrhagic areola. In the right half of the transverse colon were two larger subserous hemorrhages, while the mucous membrane of the colon and small intestine was œdematous. The entire large intestine was dilated, the muscular coat was hypertrophied in its lower part, and just above the anus was a cicatricial stricture covered with numerous polypoid vegetations and hemorrhoidal nodules. The entire superior mesenteric artery was occupied by a gray coagulum. The kidneys were granular.

It would appear from this that the superior mesenteric is a terminal artery and that embolism of it produces hemorrhagic infarct. In this case necrosis of the intestinal wall and perforation of the gut were superadded to the lesions.

"TERRIBLE TRACTORATION."

APROPOS of metallotherapy, we note that Perkins's tractors, at one time the most successful imposture then current, accomplished results not wholly explicable by the influence of the imagination. The effects of metals, or metallotherapy, are now generally acknowledged, and by those most competent to form a correct opinion. Perkins's tractors must have had curative effects, also, composed as they were of several metals. Beside the action of the metals, the mystical powers ascribed to the instrument were not without effect on the imagination. The wooden tractors used by Dr. Haygarth, of Bath, England, no doubt, accomplished as much as the genuine tractors in the treatment of affections having their seat in a disordered imagination. So, in our day, wooden images of genuine coins may have an effect not unlike that produced by the real metals. All imitations fall short, however, of the curative actions effected by the genuine tractors and metals.

In a former issue we called the attention of our readers to the Perkins's tractors as the real origin of that system of therapeutics now known as metallotherapy, or Burqism. The tractors excited an immense enthusiasm in England, and a Perkinsan Institute was founded in London for the benefit of the poor. The method was strongly opposed by the medical profession, ridiculed in the most unsparing manner, and denounced as arrant imposture. Haygarth's imitation tractors were asserted to produce the same effects as the genuine. At this juncture a powerful advocate of the tractors appeared in London under the title "Terrible Tractoration."[1] In this Hudibrastic poem all the medical novelties of the day are held up to ridicule, and the tractors defended. As a specimen of Dr. Caustic's wit we quote the following stanza:

> "Pursue the steps the learned sage hath,
> The most redoubted Doctor Haygarth,
> Who erst o'er Perkins's sconce at Bath,
> Broke a whole gallypot of wrath!!"

Terrible Tractoration was written by Thomas Green Fessenden, of Walpole, New Hampshire. He graduated at Dartmouth in 1796, was educated as a lawyer, but his tastes were literary, and he subsequently became a writer on agricultural matters. The poem above referred to betrays an extensive acquaintance with medical notions of the time. It was first published in England, where its author was engaged at the time, and an American edition appeared in 1804, in New York.

LUXATIONS OCCURRING DURING THE COURSE OF GRAVE FEVERS.

APROPOS of our editorial comments upon pathological luxations in the issue of THE NEWS for January 12th, our attention has been called to the Toner Lecture on the Surgical Complications and Sequels of the Continued Fevers, delivered by DR. W. W. KEEN, in 1877, in which that gentleman collected a number of examples of similar lesions confirmatory of the conclusions arrived at by Verneuil.

Of the 27 disiocations of the hip, 21 were spontaneous, and 6 were due to slight traumatism. In

[1] Terrible Tractoration!! A poetical petition against Galvanizing Trumpery and the Perkinistic Institution, in Four Cantos. Most respectfully addressed to the Royal College of Physicians, by Christopher Caustic, M.D., LL.D., ASS, etc.

all of the cases it is probable that the head of the femur rested upon the dorsum of the ilium, and in three the lesion was double. In 15 the accident occurred during the course of typhoid fever, and in 7 during the course of typhus fever, and 21, out of the 23 in which the age is noted, were under twenty years. In the remainder, the dislocation occurred twice at the shoulder, and once at the knee.

SOCIETY PROCEEDINGS.

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 17, 1884.

THE PRESIDENT, FORDYCE BARKER, M.D., LL.D., IN THE CHAIR.

DR. R. F. WEIR read a paper entitled

HOW ANTISEPTICS ARE USED IN THE NEW YORK HOSPITAL—A DEMONSTRATION.

After devoting some remarks to the antiseptics of the past and the manner of their use, he went on to say that one serious objection to both carbolic acid and iodoform was their highly poisonous character, and that medical literature now teemed with cases of fatal results attending their use. What quantity of carbolic acid could be employed with safety had not been definitely determined, but it had been demonstrated that it was dangerous to use more than forty-five grains of iodoform about a wound. Not quite two years ago (in March, 1882), Dr. Weir said he first began to employ bichloride of mercury as an antiseptic. All that he knew about the agent in this connection was derived from Delacroix's paper, and he at first used it in a very imperfect manner. After the researches of Kimmel, Koch, and others had been published, however, a clear idea of its powers and applicability could be obtained. It was now commonly employed in the proportions of one part to one thousand and one to two thousand of water, and it was a great boon to the surgeon to have a germicide that was both safe and cheap as well as efficient. Up to within a week he had believed that the solution of the bichloride was a durable compound, and that the acme of a surgical dressing had at last been reached. During the last few days, however, he had ascertained that it was not so durable as he had supposed; having determined to test this special point before appearing before the Academy on the present occasion. He had previously noticed that the solution when kept for some time became milky in appearance; showing that calomel had been formed at the expense of the bichloride. He had not, however, supposed that the same change took place in surgical dressings after having been put on; but he now found that after they had been in position from one to two weeks, the application to them of lime-water showed the black spot characteristic of calomel under this test, instead of the reddish tint yielded by bichloride of mercury. As soon as he discovered this, he wrote to Prof. Gibbs, of Harvard, and he had just received a letter from the latter in which he said that he thought that probably by the addition of a small quantity of common salt (five parts to a thousand) the solution might be rendered permanent, or at least more durable. At the same time he promised to make further investigations in regard to the matter.

The bichloride solution was used in various ways in the New York Hospital. In the dressing of wounds gauze or cheese-cloth was employed which had been impregnated with it, and the material used in this hospital, which cost only four cents a yard, was manufactured for it in such a way as to contain no sizing. Where the sizing existed it was necessary to get rid of it before using the gauze; which could be done by washing it with a weak solution of muriatic acid. The standard solution used at the hospital, was made up of 20 parts of bichloride of mercury, 44,480 parts of water, and 500 parts of glycerine, which is a one-quarter per cent. solution. In certain cases a stronger solution (one to one thousand) was employed. The advantage of the glycerine was that it prevented the dressing from entirely drying after it had been applied, as it had been found that the gauze became a little weakened by completely drying. In addition to gauze, various other substances were used for dressing, such as cotton, jute, peat, wood-pulp, and moss, and Dr. Weir exhibited examples of these in succession.

Peat, he said, was the most absorbent, taking up sixteen and a half times its weight of water, and also the cheapest, costing six cents a pound. Two varieties, the dark and the light-colored, were used, and sometimes these were mixed together. All that had thus far been employed had been imported from North Germany, but he had no doubt that it could easily be obtained in this country. Wood-pulp, which was used largely in Germany for manufacturing paper, was slightly more expensive, costing eight cents a pound, but it absorbed pretty nearly as much water, and it had the decided advantage over peat of being perfectly clean. But of all the substances which he had seen used in the European hospitals in a recent trip abroad, nothing pleased him so much as the bleached and pressed jute, finely carded, which differed very greatly from the common jute which most were familiar with. This costs forty cents a pound, but there was a good deal more bulk of it to the pound than of the other substances mentioned, and it was so soft and pleasant to the touch that it seemed to him the ideal surgical dressing. It did not, however, absorb as much water as the others. It could be obtained of M. Lienau, 2 Jones's Lane, New York, by whom it was imported. Another substance which served a very good purpose, and which could be found in any quantity here, was the ordinary moss of the woods. It would absorb from four to six parts of water, and it cost almost nothing. In the few instances in which he had employed it, Dr. Weir said it had answered very well.

In operations, he was accustomed to wash first the parts adjacent to the seat of trouble with a solution of two ounces of turpentine—which had been proved to be a good antiseptic—in a pint of alcohol. This was sometimes done the day before, and sometimes on the day of, the operation. Being a good solvent for fatty substances, it was very useful in removing any accretions from discharges.

In performing amputations, he now made use of a protector (a rubber cloth with a hole in it, through which the limb to be amputated was slipped), which he had seen employed in the hospitals in Germany. There

the surgeons were in the habit of keeping the part that was being operated upon constantly irrigated in a very free manner with antiseptic fluid, and such a device was necessary for the protection of the rest of the patient's body. In regard to the spray, he remarked incidentally that he had abandoned it, except in operations upon the joints and in the thoracic and abdominal cavities, in which he still continued to use it. He then digressed for a moment, to mention the antiseptic knives which Esmarch had devised. They are made of one piece of steel, so as to afford no lodgement for septic germs, which might possibly adhere to ordinary knives. One objection to them was that the handles were liable to become quite slippery if wet with blood, and in order to obviate this, Tiemann, of New York, had made some knives of which the handles were of baked rubber, but contained no crevices whatever. He also exhibited a variety of the latest hæmostatic forceps now in use, devised by Spencer Wells, Tait, Esmarch, and others, and said that he though the best was that of Hahn, of Berlin.

The amputation having been performed, all hemorrhage was to be arrested as promptly as possible; though if the Esmarch bandage had been properly applied, there would probably be none. For the tying of vessels, he had now given up the carbolized catgut ligature of Lister, which, while it was quite strong, was very slippery, on account of the olive oil used in the carbolic acid solution in which it was dipped. It had received a very severe blow, also, when Koch declared that carbolic acid when mixed with olive oil lost all its antiseptic qualities. Lister's chromic acid ligature was not open to the same objections; but the trouble with this was that it lasted too long, and thus constituted a foreign body in the wound. He therefore employed a catgut ligature prepared with bichloride of mercury solution, which, when dry, was devoid of slipperiness, and which was also sufficiently strong. It was first dipped in a solution of the strength of 1 to 100 for ten minutes, and then put in one of the strength of 1 to 1000 where it was allowed to remain for twelve hours; after which it was wound on a bobbin, and placed in 95 per cent. alcohol. An even better ligature was that which was prepared by dipping first in oil of juniper and then in alcohol, for the reason that it was not so brittle; and it was still better if it was kept in oil of juniper.

The wound was closed with the continued, instead of the interrupted suture (catgut being employed for the purpose); but an opening was always left at each end for the insertion of a drainage-tube. The black rubber tube was that which was commonly employed; but it was somewhat objectionable, because if left in position for longer than from three to five days, it caused an open tract, which required a considerable time to heal up. On the other hand, if it was removed early, it necessitated the renewing of the whole dressing, which was often very undesirable. To meet these objections, decalcified bone tubes had been devised by the German surgeons, and, as these become at length entirely dissolved, they answered a very good purpose. After the drainage-tubes had been passed in, the wound was flushed with corrosive sublimate solution until the latter came away quite clear, and compresses of antiseptic gauze were then fastened on the wound with sufficient tightness to keep up a moderate amount of pressure. Over the gauze was placed the absorbent cushion, the material composing which, whatever substance might be selected, was tacked in, so as to keep it of uniform thickness; and around the whole was wound the crinoline bandage. The stump, as dressed with the amputation cushion, presented somewhat the shape of a swollen turnip.

In many instances, an amputation was expected to heal under one or two dressings; and it was an understood fact that a cure was invariably more or less hastened by this manner of dressing. All this, of course, presupposed perfect cleanliness; and in the opinion of some authorities, it was in this point that the real secret of the success of antiseptic surgery lay. Tait, who had achieved such extraordinary success in abdominal surgery, was the apostle of cleanliness, and had discarded Listerism. His operating-room was the cleanest place that Dr. Weir had ever seen, and his instruments were all kept under water. He was particularly struck with the care that was taken with the sponges used, as he believed that more risks came from bad sponges than from any other cause. They were first thoroughly soaked with pure water, and then with a solution of one pound of soda to four gallons of water; after which they were soaked in pure water again, and then treated with carbolic acid, 1 to 20. In his wards, at the time that Dr. Weir visited him, were a number of cases of ovariotomy, hysterectomy, and other serious operations, and they were all doing perfectly well. In some there was a considerable increase of temperature, but it did not appear to occasion any apprehension on the part of Mr. Tait. The only thing of which there was to complain were one or two stitch-hole abscesses, such as were not observed in the cases of surgeons who practised the antiseptic method. Keith, of Edinburgh, rejected only the use of the spray in his operations, and Dr. Weir remarked incidentally that some surgeons, instead of the spray, made use, during their operations, of a boro-salicylic acid solution, with which they kept the parts constantly bathed.

In regard to sponges, it was very important to know how to prepare them for use, and to cleanse them thoroughly afterward, in case they were to be used again. At the present time, however, they could be purchased so cheaply that it was much better to throw them away after using them once. In the New York Hospital, the sponges are first hammered, so as to get the sand out of them, and then put in warm water. If the water was too hot, it would cause deterioration. They were then left in a 1 to 1000 solution of permanganate of potassa for twenty-four hours, and after having then been rinsed out in warm water, they were treated with a solution of 1 part of sulphite of sodium to 100 of water; one-fifth part of a solution of chlorhydric or oxalic acid (eight to one hundred) having first been added to the water. They are stirred up with a stick for a few minutes, until they whiten; if left longer, they will become friable. They are next washed out and placed in running water for some time, and finally in a solution of carbolic acid, 1 to 20, or bichloride of mercury, 1 to 1000. If the operation in which they were employed was about the abdomen, vagina, or rectum, they were thrown away immediately; but otherwise they were kept, and cleansed by the same process as before.

Dr. Weir then exhibited a splint, for compound fractures and other injuries of the leg, which was composed

of enamelled tin, so that the discharges from one patient could not possibly affect another using the splint afterwards.

In conclusion, he gave some statistics showing the great improvement in mortality since antiseptic surgery has come into vogue. Before antiseptics were employed the mortality from compound fractures in St. Luke's and the Roosevelt Hospitals was thirty-three per cent.; in the old New York, sixty per cent.; and in the Boston City Hospital, forty-one per cent. In Dr. Weir's hands, when the open method was used in the treatment of compound fractures, the mortality was twenty-six per cent., but since he had used antiseptics it had been only six per cent., and some other surgeons had achieved even more favorable results. He then gave some figures showing the same happy results in amputations performed after the antiseptic method, and brought his remarks to an end by saying that on account of the vast saving of human life by the carrying out of the principles which he first enunciated, the name of Joseph Lister deserved to be placed above all in the present century, not even excepting the discoverer of anæsthesia.

DR. POST, in opening the discussion, said that he was fully convinced of the very great value of antiseptics in surgery, although he was perhaps not altogether prepared to adopt all the minute details that had been recommended. In unimportant cases, where there was little danger, he thought this would only cause unnecessary trouble, and believed that the securing of cleanliness and drainage would be sufficient. There was one antiseptic agent to which Dr. Weir had not alluded, but which he had found very efficient, and that was subnitrate of bismuth. When first recommended in this connection it was employed in the form of a solution; but recently he had used it in the dry powder, and he had found that wounds sprinkled with it did remarkably well.

DR. BRYANT said that he had watched the progress of antiseptics with a great degree of interest ever since 1868. While an interne of Bellevue Hospital, from the fall of 1869 to the spring of 1871, he had treated some twelve cases of compound fracture, and had thoroughly injected the wounds with carbolic acid solution of the strength of one to eighty, which was the strongest then employed; the ordinary solution used in the house being one to one hundred and twenty. The whole limb was also washed with the carbolic solution, and it was then surrounded with oakum and placed in a plaster-of-Paris splint. Of the twelve cases all but two recovered, and one of these was an exceedingly bad one. Since leaving the hospital, he had habitually used the ordinary Lister dressing, and recently in the place of carbolic acid had used bichloride of mercury solution in the strength of one to two thousand, in connection with iodoform, Lister gauze, peat, etc. He always got good results with the antiseptic treatment unless, as occasionally happened, there was some defect in applying the dressings. The methods in vogue at the present day could hardly be attributed to any one individual, though to Lister more credit was due than to any other. As a Bellevue surgeon, he could testify to the extraordinary benefits of antiseptics; and he then proceeded to mention some cases illustrating their advantages which had lately been under his care in the wards of that institution.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, December 19, 1883.

THE PRESIDENT, WM. M. WELCH, M.D., IN THE CHAIR.

DR. ROBERTS BARTHOLOW read a paper entitled

WHAT IS MEANT BY NERVOUS PROSTRATION?

The popular conception of the condition now known as "nervous prostration," he said, is a state of debility in which nervous derangements predominate. A man actively engaged in business or in public life presently finds himself unequal to his daily tasks: he suffers odd sensations in his head; his digestion is disordered; he is weak; wakefulness, mental depression, and a thousand and one new sensations of strange character and fearful portent are superadded. The unfortunate subject of these ills now recoils from his work, gives himself up to the consideration of his symptoms, and relaxes his hold on the interests and occupations of his life. All the world declares that he has "nervous prostration," and this explanation satisfies. Physicians say "neurasthenia" or "hypochondria," according to their habits of mind or to their training. Sometimes this condition is called the "American Disease."

The term *neurasthenia*, advocated by the late Dr. Beard, is by no means of recent origin. The corresponding French word, used in the same sense as we now employ it, has been a stock-word of French neurological medicine for fifty years. Under the terms spinal irritation, hysteria, hypochondriasis, the nervous state, etc., symptoms of the same character as those now included in the word neurasthenia have been described. Besides the general state, similar derangements of functions of particular organs have been separately considered, as palpitation of the heart, headache, flatulence, impotence, etc. In the word neurasthenia—popularly, nervous prostration—the whole morbid complexus is included. The question I have to consider is whether this is a real, a substantive disorder. Are the notions now generally entertained about it founded on a true conception of the condition?

I need not enlarge on the importance of a correct understanding of a morbid state, which is supposed to be due to the conditions of modern, especially of American life. Dr. Bartholow then narrated the clinical history of two cases, representatives of the two types of neurasthenia, respectively the *congestive* and the *anæmic* varieties. The latter are greatly more numerous, but the former are not uncommon.

The causes of neurasthenia are complex; the effects are not limited to one organ, or set of organs, but involve the system in general. To name this malady from the disturbance in one system seems an error, unless the definition is sufficiently elastic to include all the functions affected. Neurasthenia names one, only, of the parts involved. There are two factors supposed to be especially influential in this country—work, and our exciting political and social life. I believe that the effect of these is greatly overrated.

The brain, of all the organs of the body, illustrates, in the most perfect manner, that which has been happily styled "the principle of least action." That is, to execute given tasks, it expends the least possible force, or, to express the same idea in another form, its work is

done with ease, with the minimum of effort. Given a certain amount of repose—sleep—and supplied with proper nutriment—healthy blood—the brain will do its allotted work continuously during its working—the waking—hours. So far from being injured by severe labor carried on under normal conditions, the brain is improved by it. Mental activity, like muscular exercise, keeps the brain in a healthy state. When, therefore, a man says he is suffering from the effects of mental overwork, I want to know what his vices are. Worry may be one of these. The ease and luxury of our American life another. It is the indulgence in eating and drinking, the abuse of alcohol and tobacco, sexual excesses, sedentary habits, and too luxurious lives generally, that induce the state of the system called nervous exhaustion.

Why are the somatic derangements caused by the conditions referred to, in some cases accompanied by the mental and nervous symptoms which belong to neurasthenia? Why do some subjects with indigestion and assimilative disorders, or with the results of dyspepsia and malaria, suffer from the derangements of the mental and nervous functions, and not others. I might here take refuge behind an accepted generalization, and say that the presence or absence of the neurotic type of constitution explained the difference in the result. There is aptness in this explanation, but it is not entirely adequate. There is a mental condition of great importance, and unless we comprehend this, we fail to realize all the possibilities of the nervous side of these cases. I, however, barely hint at the main points, under these circumstances. Besides, I wish to avoid a too metaphysical discussion of the subject.

In the conduct of life every man who has a position to make or to maintain, exerts a certain moral force to hold himself up to his work. Some men are so happily constituted that they are quite unconscious of the effort and stand in the front, serenely confident. Others are all the time laboring; they feel it and know it, and like the soldiers of Thomas's corps at the battle of Chickamauga, sorely pressed, now and then look back, to see whether their grim and resolute commander was still behind them with his invincible courage. Men conscious of the effort making to keep up, need but little excuse to surrender themselves to their sensations. At the present time nervous prostration is much feared; its symptomatology is a common subject of discussion; and hence, familiar with its character, a man who is arrested in his career by some of the ailments supposed to belong to it, his imagination readily supplies the rest. When a man begins the study of his bodily sensations, having a certain model in his mind, he has little difficulty in filling out the details. All the world knows that when the attention is strongly fixed on an organ of the body, functional disturbances of it ensue, and finally structural changes may be induced. No part of the body is without sensation, even in health. To perceive these sensations the attention needs to be withdrawn from external things, and concentrated on the part. Thus it is when the subject of neurasthenia pursues his introspection, he becomes conscious of numerous sensations, which, because now felt for the first time, are new. Under these circumstances, also, the seat of conscious impressions becomes more acutely perceptive. Suggestion adds its quota of symptoms.

To the indefinite and multiplying nervous symptoms developing thus subjectively, must be added the reflex. Headache, vertigo, *tinnitus aurium*, amaurosis, diplopia, hallucinations and illusions, defects of speech, paralysis, are reflex symptoms on the part of the brain; palpitation, intermittent pulse, angina pectoris, laryngismus stridulus, asthma, are amongst the reflexes of the respiratory organs and heart; neuralgia, anæsthesia, and other disorders of the sensory nerves, and local paralyses, affections of the motor nerves, included amongst the nerve reflexes, may all be dependent on reflex excitations proceeding from the stomach. Indeed, there is no symptom in Beard's catalogue of those belonging to neurasthenia that may not be due to merely reflex influences having their initial seat in the digestive apparatus. It follows that the term neurasthenia, or its common equivalent, nervous prostration, is either inadequate, or it expresses too much. Inadequate if the complex of symptoms includes the functional disturbances of all the organs affected; expresses too much if the malady is a merely nervous one.

In reply to the question, "What is meant by nervous prostration?" I respond: A disease usually functional, situated in one or more organs, during the course of which reflex disturbances of the brain occur, and numerous subjective sensations in all parts of the body are realized by the consciousness. I deny that neurasthenia is a primary nervous affection, or that it is a substantive disease. I hold that it is symptomatic and secondary.

This conception fixed in the mind, the treatment of neurasthenia is successful or unsuccessful according to the measure of our skill in localizing the initial disturbance, and in addressing our remedies to that as well as to the general state.

DR. MILLS, in opening the discussion, by request of the Chair, said: I understand that Dr. Bartholow denies that a disease exists, primarily nervous in origin, which can be called neurasthenia. He classes all cases so-called under two heads, congestive and anæmic, and holds that the symptoms presented are chiefly reflex effects of digestive or other visceral troubles. I have no doubt that many cases are to be thus explained, but we have others in which the cerebral condition is primary. In cases with the symptoms as detailed in the paper, we may perhaps clearly ascribe them to the causes and conditions referred to by Dr. Bartholow, but other cases may be explained in a different manner.

In individuals whose higher ganglionic centres are so constituted, from bad inheritance or poor training, or both, that they cannot bear much strain, when subjected to this strain these centres exhaust. We have certain functions called organic functions, respiration, vasomotor action, etc., with centres in medulla oblongata and spinal cord. These functions must be maintained as long as the individual exists. Their centres must be nourished and sustained in a uniform way. Presiding over automatic movements, they must be kept in the highest tone, must have good blood and plenty of it. It is a principle brought out in the paper that local diversion of blood to any one organ or part will take it from other organs or parts; and we may, in accordance with this, have the higher brain diverting blood from the lower, or lower brain from the higher. We have *nervous* symptoms, the result of this overstrain of nerve-centres, and the disturbance of the equilibrium of the circulation, thereby brought about.

The point that has particularly attracted my notice, was an allusion to the condition of the urine in one of the cases. It was described as dark brown, of high specific gravity, containing a trace of sugar. I have seen such cases, and think it not unlikely that the apparent sugar reaction is really due to uric acid, which is often abundantly present in these urines of deranged digestion. If we get rid of the excess of uric acid by allowing it to precipitate spontaneously, or precipitate it by the addition of an acid, the sugar reaction with the copper tests does not take place. Other characters of the urine, particularly its dark color and scantiness, are not usual to sugar-containing urine.

DR. ESKRIDGE: The most important point in the subject is whether the condition called neurasthenia is primarily a nervous disorder, or a disturbance in other parts of the body. Those who have paid attention to this subject say that breakdown does not occur unconnected with either worry or vice. I have never seen a case from mental overwork alone.

It appears to me that nervous prostration, so-called, is a depressed condition of the whole system, the trouble manifesting itself as a general nervous condition secondarily, after organs other than the brain have been primarily affected. The therapeutics also favor this view, because the cases are benefited, not by agents addressed to the nervous system alone, but by hygienic and tonic measures.

DR. BARTHOLOW, in closing the discussion, said: The great question is, Is neurasthenia functional, or does it arise from organic change in the nervous system? I maintain that it is largely reflex and frequently from gastric disturbance. Neurasthenia in women is associated with an anæmic condition and ovarian and uterine disorders. They are pale and weak, and if they are subjected to any moral or mental trouble give way, but if they are well nourished, sustain any kind of shocks without suffering in health.

Worry has been mentioned as a cause of nervous exhaustion; now, worry hurts a man just in proportion to his condition. If he is in good health, or phlegmatic in temperament, the worry may be well borne; but if he is out of health, worry will have a powerful effect on the nervous system. I do not deny that various causes may produce brain disease, but I deny that the so-called neurasthenia is due to an organic lesion of the nervous system. I maintain that it is part of a morbid complexus; a reflex condition, in large part, of maladies situated in the stomach, the liver, the uterus, or other organs.

DR. WM. S. LITTLE then read a paper on

EYE SYMPTOMS AND CONDITIONS IN BRIGHT'S DISEASE.

Among nine hundred and eleven cases of Bright's disease reported by different observers, changes in the retina have been observed to be associated with the kidney affection in twenty per cent. The recognition of Bright's disease from lesions in the eye, in a case already diagnosed from symptoms in other organs, is not of so much importance for diagnosis as it is a help in forming a prognosis; nor does the condition existing in the eye demand the therapeutics of special medicine.

Retinitis, generally symmetrical, if not always so, appears in all forms of kidney disease, while it is principally associated with the chronic disease of the cirrhotic kidney. Even though symmetrical, its presence is not always known to the patient; especially is this so, as long as the region of the macula lutea in the retina is not affected, so as to produce a central scotoma; lesions near the nerve and peripheral parts of the retina are not so productive of recognizable scotoma in the field of vision. These cases do not have the restricted visual field and rarely the loss of color-sense that belong to the optic nerve and brain troubles or contracted field of glaucoma. The symptoms may correspond to those of retinitis from any other cause: flashes of light, color sensations, dread of light, impaired vision, to total blindness.

While the lesions occur generally near the optic nerve and to the temporal side, the nerve itself is not implicated to the degree that might be expected from the picture it presents; the separate spots in the retina finally coalesce, approaching the disk, and involving it; in other cases they surround the region of the fovea centralis, and are much smaller. They may occur anywhere in the retina, varying in size; the shape is somewhat quadrilateral, but may vary as they progress; they present a white appearance. The tissue near the disk and the disk itself appear striated; spots of hemorrhage are found from rupture of retinal or choroidal vessels; opacities in the vitreous are seen. The state of pigmentation is the latest. In chronic cases the color of the fundus is peculiarly yellow, and the character of the picture is at times very much like the neuro-retinitis of brain disease or pernicious anæmia.

The changes result from the hyperæmia and infiltration of the tissue, fatty degeneration and atrophy producing changes in the bloodvessels with hemorrhage; a fatty deposit in the retinal tissue; the fibres of the retina become sclerosed, and pigmentation follows.

The optic nerve is not seriously involved, though gray degeneration may exist, and numerous amyloid bodies may be seen with the microscope. The retina does not always present all the stages described; the kidney disease being amenable to treatment, the retina may not undergo any further change; where it is chronic, a like progression ensues in the retina. Marked lesions at times disappear, leaving only a slight trace. The hemorrhagic state is more severe, the sight not only being lost, but the patient's life endangered.

The prognosis, so far as vision is concerned, is serious, when the region of the yellow spot is encroached upon, and yet fair vision may remain after subsidence of the disease.

Can a prognosis as to the duration of the disease or to its fatality be derived from the eye symptoms? Only in the chronic stages of the disease, when retinal hemorrhages are extensive and repeated, the heart being diseased. Traube considered the heart the immediate cause of these retinal hemorrhages; but they exist in cases without heart trouble, and in other diseases of the system, and in intraocular conditions. Brain symptoms soon follow in these severe types of retinitis, in chronic kidney disease a general hemorrhagic condition being developed, or uræmia may ensue. In the acute forms of Bright's disease no prognosis of any value can be formed from the eye symptoms, though severe.

As to treatment of the eye in this disease; what renders the disease of the kidney controllable, is only of advantage to the retina; leeching may be useful if the

patient is not too anæmic. For the vitreous opacities, in cases where the disease is under control and the acute condition of the eye abated, electricity is of considerable value, much more so than any plan of medication.

DR. ALBERT G. HEYL desired to direct attention to the relation which exists between the intraocular phenomena observed in Bright's disease and the anatomical arrangement of the intraocular arteries. The latter are divisible into certain areas; thus we have one area composed of the arterial circle of Zinn, which supplies the optic papilla; another formed by the arteria centralis retinæ, which supplies the retina; another composed of short posterior ciliary arteries, which supply the posterior half of the choroid; yet another composed of the long ciliary arteries which supply the iris and the anterior half of the choroid; the short anterior ciliary arteries also take part in the formation of this area. Now, it is established that abnormal changes in connection with Bright's disease may exist primarily in each of these areas, with perhaps one exception, to be mentioned directly. Thus the papillary area may be affected, and a papillitis will be found on examination, the choroid and retina and iris being unaffected. Again, the posterior choroidal area may be affected, and there will be found the phenomenon of subretinal œdema, and also in the choroid the white accumulations so well known in connection with Bright's disease. Both of these forms are considered to be rare; perhaps they would be observed oftener were we more alert. A case reported by him (THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, October, 1874) of retinal separation occurring in one eye, while simultaneously the other was affected with temporary amblyopia, probably belonged among the affections of the posterior choroidal area. Further, the retinal area may be affected, and the peculiar retinal appearances so well known are found. So far as he is aware, no separate affection of the irido-choroidal area had been described; there seems to be no reason why it should not occur. Of course there are many cases in which the areal lesions exist together, but they are to be looked upon as the result of one common cause, not as the result of a morbid process starting in one area and gradually implicating the others.

In referring to the snow-like patches of the fundus, commonly looked upon as the characteristic intraocular appearance of Bright's disease, he thought that to a certain extent they are to be looked upon as the remnants of intraocular hemorrhage. While hemorrhagic clots formed of normal blood are absorbed without any whitish residuum being left, the case is different where the blood, as it circulates in the vessels, is in a morbid state. Thus, in a case of pernicious anæmia, he has observed a number of round red hemorrhagic spots with white centres. On examination ten days later the red coloring-matter of the hemorrhages had largely disappeared, leaving as a residuum white masses. Some of these were speckled with red points, arranged in spindle form like the hemorrhages of the retinal nerve-fibre layer. They were, however, simply the unabsorbed remnants of the round hemorrhagic spots seen ten days before. So in morbus Brightii, the blood is in such a morbid condition that hemorrhagic clots rapidly lose their red coloring by absorption, leaving behind a white residuum which may partially, at least, explain the white plaques seen with the ophthalmoscope.

DR. JAMES TYSON then presented a note on some

RECENTLY SUGGESTED DELICATE TESTS FOR ALBUMEN.

He said that recently several delicate tests for albumen have been suggested by different observers. Among them are: 1. A saturated solution of picric acid; 2. Saturated solution of ferrocyanide of potassium after free acidulation by citric acid; 3. Standard solution of potassio-mercuric iodide,[1] after acidifying the urine by citric acid; 4. Equal parts of a saturated solution of sodium tungstate (1 in 4), saturated solution of citric acid (10 in 6), and of water; 5. Acidified solution of potassio-mercuric iodocyanide. To complete our list of available tests we may add: 6. The ordinary heat and acid test; 7. The nitric acid test, by Heller's overlaying method; and, 8. The acidulated brine, consisting of an ounce of hydrochloric acid added to a pint of water saturated with common salt, and filtered.

The whole subject of these delicate tests has been gone over by Dr. George Oliver, of London. As all of the tests which are not distinctly acid require the previous acidulation of the urine, Dr. Oliver has modified the picric acid solution by adding two drachms of citric acid to one ounce of the solution. Leaving out the potassio-mercuric iodocyanide as a solution troublesome of preparation, Dr. Oliver's results as to all the other tests just named are as follows: Adopting the method of overlaying the test solution by the urine (all of them as above prepared are specifically heavier than ordinary urines, while the pure picric acid solution is lighter), *one part of albumen* may be detected in

PARTS OF URINE.		TESTS.
20,000	by the	Iodo-mercuric, Picric acid, Tungstate.
10,000	by the	Ferrocyanide,
12,000		Acidulated brine.
6,000 to 7,000	by the	Heat, Nitric acid.

Dr. Tyson said: I have carefully repeated Dr. Oliver's testings, and have arrived at results which, while not identical, may be said to be practically the same—except, perhaps, in the case of heat and acid combined, which I find decidedly more delicate than the pure nitric acid, and more delicate than the acidulated brine solution. So, also, I do not find the sodium tungstate solution quite as delicate as the picric acid and the potassio-mercuric iodide; but they may be placed in the same category. As the result of this experience, it appears to me that the use of nitric acid may be altogether substituted by the acidulated brine, as a solution at once more delicate and, on account of its non-corrosive properties, altogether more satisfactory to manipulate.

In THE MEDICAL NEWS for October 27, 1883, Drs. Cooke and Watkins prove that the urine of persons taking six grains of quinia or cinchonidia daily will invariably give a precipitate with picric acid, nine or ten hours after the administration. Also, that solutions of sulphate of quinia and of cinchonidia containing $\frac{1}{120}$ grain gave a decided precipitate, and one containing $\frac{1}{180}$ of a grain an appreciable precipitate. With a view to testing these results, I tested my own urine on a

[1] Mercuric chloride, 2.7 grammes; potassium iodide, 6.4 grammes; distilled water, 100 cubic centimetres.

given day with picric acid, and found no response. On the following day I took twenty-two grains of sulphate of quinia in three doses, taking the last dose at 6.30 P.M. The urine passed at 8.30 P.M. gave a beautifully distinct white line, when overlaid by a pure picric acid solution. So also did the urine passed at 9 A.M. the next day; but that passed at 3 P.M did not respond. I also found that a solution of sulphate of quinia containing $\frac{1}{100}$ of a grain to the fluidounce responded similarly. I then repeated the experiments with the remaining tests, and found that the potassio-mercuric iodide gave identical results with the picric acid solution, *but that the sodium tungstate and ferrocyanide of potassium solutions did not.* So that we shall have in these two solutions, and particularly in the sodium tungstate, a test solution more delicate than heat, acid, or brine, which does not precipitate quinine in solution.

Picric acid has also been shown by Dr. George Johnson to precipitate artificially prepared peptones. And the same is true of potassio-mercuric iodide and sodium tungstate; and as peptones have been shown to be present in a considerable number of urines, they must be admitted as possible sources of error, the exact importance of which is as yet to be determined. The ferrocyanide solution does not precipitate peptones, but, in common with the others, occasionally precipitates amorphous urates. But these, behaving precisely like the amorphous urates thrown down in the Heller test by nitric acid—that is, forming a smoky cloud rather than a distinct layer, and being easily dissipated by a moderate heat—need not be a source of error. An excess of albuminous urine dissolves the precipitate formed by picric acid, but this need not be a source of error. It is said, too, that potassium salts are precipitated. But, so far as we know, no other agencies likely to be found in urine can lead to error; so that, if we remember to eliminate quinine as a source of error, the picric acid solution, acidulated with citric acid, is still an available test of great delicacy, which is further recommended by its cheapness and easy preparation; although, so far as our present knowledge goes, the sodium tungstate solution is the best, and least liable to cause error.

DR. DULLES said that the error caused by the precipitation of quinine by picric acid, may be corrected by adding nitric acid, which dissolves the quinine precipitate, but not that of albumen.

DR. LEFFMANN said that he has found the glacial phosphoric acid the most delicate and easily applied test.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, January 8, 1884.

THE PRESIDENT, WILLIAM J. MORTON, M.D., IN THE CHAIR.

NOTE ON THE USE OF THE MENTHOL CONE AS AN ANODYNE.

DR. E. C. WENDT showed a little contrivance, called by the Germans *Migräne Stift*, and explained the method of its application and uses. It consisted of a piece of menthol moulded into a conical shape and secured in a little wooden box, closed by a cover to prevent evaporation, soiling, and breaking. It seemed to be very little known here, although it is much used abroad, especially for sick-headache. His attention had been first directed to the anodyne properties of menthol by a short notice, published in the *Medical Record* of April 28, 1883, by Dr. Cammann. That gentleman had recommended an alcoholic solution of menthol (ʒj to ʒss alcohol) to be painted over the affected parts. Dr. Wendt had since that time often used this solution, and found it a rather reliable anodyne. Its pain-relieving action was restricted, however, to the slighter ailments, especially those of neuralgic character. Since his acquaintance with the solid menthol cone, he had frequently substituted the direct application of menthol, by means of the latter, for the solution formerly employed. He would admit that the only advantage which the solid cone or pencil had over the solution, consisted in the greater simplicity of its application, its ready portability, and the fact that its vapor was not apt to irritate the eyes of susceptible patients. He had repeatedly heard complaints in that direction from ladies, regarding the solution, which was obviated by using the cone.

In this country menthol had not yet received that amount of recognition from the profession, to which its pain-obtunding properties would seem to entitle it. In fact, little seemed to be known about it, and for this reason Dr. Wendt thought it might not be amiss to quote a descriptive notice which had appeared in the *Midland Medical Miscellany*, of October, 1883.

"Menthol or menthylic alcohol, $C_{10}H_{20}O$, is a crystalline substance, deposited from the oil of peppermint, prepared in China and Japan from *Mentha Arvensis var. Piperascens and Glabrata.*" It formed the chief ingredient of a much valued remedy for neuralgia before its nature or source was generally known. Under the name of po, ho, yo, or *Goutte Japonaises*, it has been sold in small bottles, labelled with Chinese characters. It is a white crystalline stearoptene, melting when pure at 97° Fahrenheit, and is obtained by the Japanese from the oil of peppermint, by submitting it to freezing several times in succession until no more menthol crystallizes out. It is also said to be contained in the American and English oils of peppermint, but probably in small quantities only. It is somewhat surprising that the Japanese peppermint plant which is grown in England as a curiosity, has not been cultivated in that country as a source of the drug, the supply of menthol being uncertain, the demand great, and the price in consequence occasionally very high. Menthol is said to be sometimes adulterated with crystals of Epsom-salts, to which it bears a great resemblance. These being insoluble in alcohol or chloroform, in which fluid menthol is freely soluble, can easily be detected. Samples of fine crystals sometimes contain some essential oil adhering to them, a fact which must be taken into consideration when the menthol is made into cones or pencils. Menthol is but slightly soluble in water, although imparting a strong odor and taste to that liquid, and is insoluble in aqueous alkalies. It is soluble in fixed and volatile oils and in ether.

Although Dr. Wendt's experience with menthol had not been a very extended one, it had nevertheless been sufficient to convince him of the utility of the drug, in a rather large class of cases. Thus, as already stated, he had found it a very pleasant and reliable anodyne in all the lesser neuralgias, and especially in those so frequently occurring about the face. But it was also ser-

viceable in many painful affections due to inflammatory processes. For example, in mumps, in the cervical adenitis so often accompanying sore throat, and in numerous other affections where pain was a prominent symptom, menthol might be used to advantage. With regard to its topical action, it was similar to that of aconite, over which it had the advantage of not being poisonous.

Dr. Wendt remembered one rather striking case of quite severe supraorbital neuralgia, which refused to yield to the oleate of aconitia, but was much benefited by the menthol. But, on the whole, in violent attacks he had found it almost useless. In typical migraine, for instance, where the pain was at all severe, and in all deep-seated aches of more than very moderate intensity, it had no appreciable effect, except, perhaps, the indirect psychical action of distracting the sufferer's attention.

In the discussion which followed these remarks, DR. ROBERTS asked Dr. Wendt if he had tried the prolonged application of menthol.

DR. WENDT said that he had in some cases of hemicrania, though without decided benefit. Nevertheless, the patients experienced a pleasant sensation of coolness of the surface followed by a feeling of agreeable warmth.

DR. MORTON desired to ask Dr. Wendt, in what sense he used the word anodyne. Dr. Wendt said in the usual one, of affording relief from pain by blunting sensibility.

DR. MORTON thought that menthol probably acted more after the manner of counter-irritants, by insuring relief in a reflex rather than directly local way. Mustard was a typical peripheral nerve-irritant, and it seemed to him that the action of menthol could be best explained on the same principle, of procuring peripheral nerve-impressions in a reflex way.

Dr. Morton stated that his attention had been first called to the menthol cone by Dr. Wendt. He chanced to be at the latter's office one day when suffering from a headache. A few strokes of the menthol gave him at once a sense of relief. He felt the effects of the peppermint to be as gratefully cooling as the application of, say, cold metal. In brachial neuralgia, as well as in sciatica, he had been pleased with the good effects of menthol. He thought the drug was deserving of further trials.

CORRESPONDENCE.

THE PRESENT STATE OF MEDICINE IN JAPAN.

To the Editor of THE MEDICAL NEWS.

SIR: As the word Japan seems to open visions of El Dorado to all non-resident aspirants to fortune, and lest the heading of my letter should incite some of my brethren to its perusal in hope that it may prove in some sort a directory to the, presumedly, overflowing wealth of the Orient, let me begin by a word as to the status and prospects of European and American physicians in this portion of the Far East. As to present status, those medical men now here, save of the small and rapidly decreasing number in government employment, are doing, and must do, more work for less remuneration than in even our smaller cities at home, while the expense of living in decent comfort is far greater in Japan than in the United States.

This country is now passing through a severe financial crisis; business of every kind is at a standstill, and as the foreign practitioner must depend almost exclusively upon the foreign residents for his support, the depression of trade affects him severely. It is but rarely that the services of a foreign doctor are called for by the natives, first, because the majority of these much prefer their own physicians; second, because they are rarely able to pay for his services—in fact, cannot understand that a physician's time or advice has any money value, the old custom—still almost universally in force—being to pay the medical attendant for medicines furnished, for which alone the physician has a legal claim to remuneration, and to pay, or not to pay, in addition, an honorarium generally ridiculously small, and entirely a voluntary matter; third, because in the larger cities of the Empire there are foreign medical officers attached to the Government hospitals, whose advice can be had by the richest at an expenditure amounting to little more than the wholesale cost of the medicines prescribed. The number of foreign doctors thus employed is now small and diminishing, their places, at the expiration of their contracts, being filled by natives educated abroad, or at the Imperial Medical School mentioned hereafter. Our services—I speak as one of the resident foreign physicians—are even less in demand by the natives than formerly, for Japan has, perhaps, made more real and solid progress in medical science than in any other branch of western learning, and has now a considerable number of fairly good men—either educated in foreign countries, where some have won honors, or under foreign instructors in the Government hospitals and medical schools at home. In addition to these better men, who, of course, are found only in the Imperial service or in the larger cities, there is to be found in almost every town of the Empire at least one native physician practising, so far as his education will permit, according to the modern system.

The Government offers every encouragement for the advancement of the native practitioners in modern science. The innumerable appointments in its gift are bestowed only on men of the new school, while, as regards those practising privately, a system of examination and graduated license has been put in force throughout the Empire, which would afford no bad model for adoption in some of the United States.

Japan has now a considerable literature of modern medicine, which is rapidly increasing, and there are also something like a dozen medical periodicals, well supported. It is true that the execution of the translations, which compose the bulk of the literature in question, leaves much to be desired, yet the essentials of the original are generally preserved, and gross errors infrequent.

Ten years ago, the number of books on modern medicine in the Japanese language could have been counted on the fingers of one hand, while the writer at that time established, under Government auspices, the first medical journal of the country. A few months ago, a shipment of some four hundred volumes of medical text-books was sent to the library of the Surgeon-General, U. S. A., at Washington, and nearly as many more will shortly follow. Many of these are really beautiful reproduc-

tions of expensive illustrated works from the presses of Europe or America, though original treatises of almost equal mechanical execution are not wanting. It follows that, should any of your readers wish to investigate for himself the state of medical literature in Japan, he will find material within reach, the library mentioned containing, in addition to the above-mentioned books, full sets of the leading medical journals of this country.

The exquisite workmen of Japan have, of course, undertaken the manufacture of surgical instruments and apparatus — almost all known surgical appliances, of native manufacture, being found in the shops of the dealers in medical supplies. In appearance and finish, the instruments of domestic manufacture are indistinguishable from those imported, and, with the important exception of those whose value depends upon the quality and temper of the steel employed, are equally useful. It is difficult to understand the failure of the native artisan in the construction of small articles of steel, for the Japanese metal is second to none in the world, as will be readily granted by anyone who has seen the tests endured by a Japanese sword of good quality. When this difficulty in the management of small articles of steel shall have been overcome, as no doubt it speedily will be, the Japanese surgeon will be able to furnish himself more cheaply than in any other country.

It will be seen, then, that so far as material goes, the means are not wanting for the theoretical education or the equipment of every native student, while the many and often admirable hospitals maintained by the Imperial Government, or by subscription, afford good opportunities for clinical study.

Facilities for anatomical work are, however, sadly lacking. Though Japan has an anatomy law, which many of our benighted States would do well to copy, its operation is so hampered by the prejudice and mistaken benevolence of the people, that even in the great city of Tokio (Yedo) the Imperial School of Medicine is unable fully to supply its students with anatomical material, while in the provincial hospitals and schools opportunities for dissection are rare indeed. Realizing the value of anatomical study, and the difficulties in the way of its pursuit, efforts have been made to compensate for the want of actual dissection by the publication of elaborate atlases and anatomical wall-plates, and even by the reproduction in fac-simile of Auzoux's great manikins at a price of about one-third the original. The lack of facilities for the study of practical anatomy is the more, perhaps, to be regretted from the fact that the Japanese excel in many of the qualities which go to make a successful operative surgeon. Steady nerve, marvellous dexterity, mechanical tact, and a power of mentally reconstructing form that is absolutely astonishing, are qualifications to which, if a knowledge of anatomy were added, the product should be a surgeon above the average.

À propos of this power of recalling form, which is almost universal among the better class of Japanese, I am inclined to attribute it to the personal and hereditary influence of training in the use of the Chinese character, a knowledge of several thousands of which complicated and arbitrary forms is necessary to every Japanese who would either read or write anything esteemed of value. The æsthetic sense of the race may also have influence in this direction.

I have spoken of the Imperial School of Medicine at Tokio (Yedo), and of the larger hospitals throughout the country, as affording opportunities for instruction under foreign teachers. The former is under management exclusively German, and, in fact, of late years, German physicians have had almost entire control of the medical education of the country. With many others of long experience among the Japanese, I believe this to be a sad mistake, the more so as the curriculum of the Imperial School is modelled almost exactly upon that of the German universities. Quick, ready, and intelligent as the Japanese undoubtedly are, their mental calibre is, in many respects, that of precocious children, and their science is, and for a considerable period must remain, imitative and routine. With the concrete, the native mind is familiar and expert; with the abstract, it can do little. What Japan needs, at this time, is a considerable body of men sufficiently educated to deal with the ordinary diseases of the country, and she needs them urgently. What the Imperial School is endeavoring to do under the disadvantages of the use of a foreign language, useless for any other purpose of study or business, for which English is universally preferred, enforcing new methods of thought, and having an eminently practical race to work upon, is to turn out men fitted for original investigation of the deepest mysteries of science and versed in all the theories of modern medicine, proved or purely hypothetical. What this school really does, is, yearly, to graduate the few who are found physically and mentally competent to stand the strain, having all the faults of the German school of medicine in aggravated degree, therapeutic nihilism their creed, and holding the welfare of the patient even more entirely subordinate in interest to the natural history of the case, than do their teachers.

That Germans now have the preference in Japan, as teachers, in almost all branches of science and literature, is probably due to the fact that the more conservative members of the Government feel that the country has progressed rather too rapidly toward free thought and free institutions, and believe the political system of Germany to be more in accord with that desirable for Japan, than those of England and America. The students themselves, however, much prefer the English language and English and American books, even as regards medicine, and it is chiefly from these sources that the present literature is derived.

The old school of medicine in Japan was nearly identical with that of China, a melange of superstition and an absurd and utterly artificial system of anatomy and physiology, with the results of ages of empirical practice —the latter having led to a more or less correct appreciation of the use and value of many medicines used by ourselves, *e. g.*, mercury, antimony, and aconite. In addition to a vast number of plants and minerals, animal substances form an important element of the old pharmacopœia. Whole cargoes of dried fœtal deer are yearly shipped from the island of Yezo to southern Japan and China; while dried lizards, tigers' claws and teeth, bears' galls, monkeys' skulls, and other even more repulsive substances, are largely used. In fact, the Chinese practitioner of to-day is working with much the same armament as did our predecessors in the not very long past time when treacle of mummy was a panacea. But, absurd and disgusting as the materia medica of the

old school of medicine in Japan and China may at first glance appear, it is probable that in their immense, and to us little-known, field of natural resources the empiricism of a shrewd people has discovered some therapeutic agents of value, and such as would repay a thorough investigation of their pharmacopœia by some medical Sinalogue. I will return to this subject further on.

Although trained in the same school and holding allegiance to the same ancient authorities, the essential difference between the stolid conservatism of the Chinese and the active and progressive disposition of their insular neighbors, was shown even before the opening of Japan to foreigners generally, by the attainment of a partial emancipation from the thraldom of the old school through the voluntary efforts of native practitioners, and this, too, at a time when even to read a foreign book without the special permission of the Government was a capital offence. A native doctor, having accidentally seen a volume of anatomical plates at the Dutch settlement of Nagasaki, returned to his distant home disquieted and anxious, realizing that if the drawings he had examined were correct, his whole system of science, based as it was on different premises, must fall to the ground. Unable to prosecute research upon the human cadaver, he carefully dissected all the quadrupeds he could obtain, and finding, throughout, close similarity to each other, and to the pictures he had seen, he at last, after great labor and no little danger, obtained permission to dissect a criminal. This dissection settled the question for himself and friends, for the science of the western foreigner was vindicated. From this began a movement, resulting in permission being given that a limited number of natives might study under the Dutch surgeons at Nagasaki, and in the translation of a few medical treatises of an elementary character.

Another instance of progress is even more remarkable, as it was entirely independent of assistance from without. A native physician, belonging to a family with whom the practice of the obstetric art was hereditary, for male accoucheurs have long existed in Japan, though in small number, after many misfortunes in the line of his practice, and a long time devoted to study and investigation, elaborated a fairly complete system of midwifery, and published an illustrated treatise on the subject. Kagawa Shigen found the obstetric art of Japan in a condition little, if any, better than among the American Indians of to-day; he left it almost upon a par with that of Europe before the invention of the forceps. He invented a number of convenient and practical instruments, which, though in some respects resembling others of European origin, differ sufficiently from these to prove independent evolution, while his book, which affords intrinsic evidence of originality, contains a series of really valuable precepts and clinical observations. Unfortunately, like the Chamberlens, Kagawa attempted to keep his improvements secret within the limits of his own family, and, unlike the Chamberlens, succeeded, until recently, in so doing. A descendant of the reformer is to-day practising in the capital, and exhibits so little of the ancestral spirit as to ignore all science save as contained between the covers of his inherited manual.

The aged Solomon's grumbling remark, that there is nothing new under the sun, seems to derive much confirmation from the Orient, and it need hardly surprise one greatly to learn that any of our supposed recent discoveries were anticipated ages ago in the Far East. Am I wrong in believing that the extract of malt is esteemed by many as one of the most recent triumphs of restorative medicine? The Japanese and, to some extent, their Celestial neighbors have used this article, or something closely related thereto, for centuries. The experience of my foreign colleagues and myself in the medicinal use of the native preparation has been so favorable that I cannot refrain from a few remarks upon it, even though quite aware that this long and gossiping letter should ere this have been brought to a close.

The article in question is known in Japan as "ame" or, in its better form, as "midzu ame," and as it is the latter which is most convenient and valuable for medicinal use, it is of this variety that I shall chiefly speak. Midzu ame, of the best quality, is a clear, transparent, faintly brown, or amber-colored syrup, or may have the consistence of candy, according to the amount of water contained. If properly prepared, it ferments only with difficulty, and long keeping changes it only by inspissation. The flavor is pleasant; so much so that some of our foreign residents prefer it, for table use, to the best imported syrups, while, when used medicinally, it rarely becomes distasteful, even after prolonged administration.

To describe in detail the manufacture of midzu ame would occupy too much space at present. Suffice it to say that it depends upon the now generally known fact that starch, in the presence of malt in solution, is converted into a saccharine body (maltose). The malt used is, as elsewhere, derived from barley, germination having been allowed to proceed to a greater extent than is usual with us; the starch is that of rice or millet, preferably the former, of which a peculiarly glutinous variety is chosen.

The consumption of ame in its different forms is enormous in Japan. The cheapness of the article, as compared with sugar, renders it the basis of a large proportion of the confectionery used. I have spoken of its use by the natives medicinally; it is, however, only as a digestible and strengthening food for the aged and for hand-fed or weakly infants, that it has, until very recently, been prescribed, and from this point of view alone midzu ame will be found well worthy of trial elsewhere. So far as children are concerned, I know nothing more useful for the feeble or bottle-fed than the article in question. During the past five years, the writer having been first to call attention to the subject, midzu ame has been largely used by both foreign and native practitioners in cases of dyspepsia and malassimilation, of almost every variety, with such success that the consumption of the better qualities has considerably increased, while several manufacturers are now devoting themselves to the production of special grades for exclusively medical use.

Midzu ame ranks as a food close to cod-liver oil, for which it will often be found to be an efficient substitute. In many cases of phthisis it has proved so useful that I shall not be surprised should the lapse of time show that ame is quite as valuable in this disease as is the oil. It is, however, of its use in dyspepsia that I would specially speak. An experience of several hundreds of cases, both native and European, and in conditions varying from mere sluggishness of digestion to almost total and fatal inanition, has demonstrated that ame is

far more than an easily assimilated food. This it certainly is; but it has, in my opinion, a power to assist in the conversion of other food beyond that of any agent heretofore employed, and is to be relied upon to exert the action which we hope for from pepsin, artificial gastric juice and the like, but in which we are so often disappointed. It is probably this power which, in cases characterized by active fermentation, acetic or butyric, enables the ame, saccharine body though it be, to act as an anti-ferment, for it is in this class of cases that the benefit derived from its use is most speedily manifested.

Granting the foregoing statements to be correct, it will be seen that we have in the article under consideration a nourishing, agreeable, and easily digested food, which can often be taken, and duly appropriated, after cream, raw beef, acid emulsions, and the like, have failed, and which will frequently secure the digestion of more or less other food, almost from first administration. I would not be understood as asserting that this contribution from the Far East is either infallible or specific, but that it has often saved life and, in an immense number of cases, restored health, even after the failure of approved treatment, I am certain, as well as that the experience of most of my colleagues has been equally favorable.

It is to be hoped that an opportunity may soon be given for a thorough and unprejudiced trial of ame in the United States, and that, in order that such may be secured to it, whoever undertakes its introduction will put it in the hands of the profession only, in proper manner, and without the clap-trap and advertising falsehood which repel every honest physician from what may, perhaps, be a really valuable and much needed article.

STUART ELDRIDGE, M.D.,
Medical Director of Imperial Hospital of Kanagawa Ken,
Surgeon in Charge of the Foreign General Hospital of Yokohama.
YOKOHAMA, JAPAN, December 20, 1883.

NEWS ITEMS.

PUBLIC HEALTH.—Mr. Green, of North Carolina, introduced in the House of Representatives, last week, the following preambles and resolutions, which were referred to the Committee on Public Health:

Whereas, It is popularly charged, and generally believed, that divers and various articles of food, drink, and medicine are adulterated by admixture with baser and usually deleterious substances; and,

Whereas, Such adulterated compounds are injurious to public health, and calculated to shorten human life, therefore, be it

Resolved, That the Committee on Public Health be authorized and directed to inquire into the truth of said alleged abuse, and to report to this House the result of their investigation at as early a day as practicable; and, if it shall be shown that such practices exist, then to suggest or recommend in their report what further legislation, if any, is necessary to correct the wrong; and, that they may more effectually do their work, be it further

Resolved, That said Committee be, and they are hereby, empowered to send for persons and papers, and to employ such medical and chemical experts as they may deem necessary to carry out the end, aim, and object in view.

THE NEW YORK STATE MEDICAL SOCIETY AND THE CODE CONTROVERSY.—The annual meeting of the New York State Medical Society occurs at Albany this year on Tuesday, February 5th. At this meeting three distinct propositions in regard to the ethical question, laid over from the last meeting, will come up for action. The first of these in order is the no-Code proposition, or the declaration and resolution to abolish the present New Code. The second in order is a proposition to repeal the action taken on the Code at the meeting of 1882, leaving the Old Code to stand as it was prior to that action. This comes up as an amendment to the by-laws. The third is a proposition to substitute the National Code for the New Code. Then, when representation in the American Medical Association is regained, that the delegates of this Society be instructed to advocate such modifications in the National Code as may make it more liberal, or, if advisable, to urge its entire abolition.

All these propositions are amendments of the by-laws, and therefore require for adoption the "consent of two-thirds of the members present at an annual meeting."

They will probably come up in the order in which they were recorded, and that is as above given.

The first, or no-Code proposition, cannot possibly be carried without the New Code advocates, and these latter must have a two-thirds majority present in order to do it. That, too, will be impossible, unless the Old Code advocates absent themselves from the meeting in greater numbers than ever before since the adoption of the New Code. No Code is the only rational and logical position of this movement, and it is therefore doubtless the ultimate aim of the movement, and may be brought forward every year until it is carried, but its success this year is improbable.

If the second proposition be carried, the third will fail or be modified. But if the second fails of a two-thirds vote, the third will almost necessarily fail also, although it has a somewhat different aim. Neither will be allowed to succeed if the new movement can prevent it.

The time for any further discussion of any such proposition seems now to be past, and they will therefore probably be put upon their passage without the disagreeable wrangling and parliamentary tactics which have disgusted and disheartened so many conservative members, and probably kept them away from the late meetings. At least, there is no use, nor any common sense, in any renewal of strife. The Society is now hopelessly split, and that upon a principle of honor, or at least upon a basis which is assumed to be such by both sides of the split, because the revolutionists consider themselves as much bound in honor to destroy the old ethical basis of the Society's organization as the conservative element does to protect and defend it. And when a principle is involved, to yield is to submit. The vote, therefore, is to be for the final possession of the Society, and whichever party is defeated, must withdraw and form new organizations if they desire to have them. Hence, as a matter of professional principle and honor, it seems to be the professional duty, as it should be the pride, of every delegate and permanent member

of the Society, to go to this meeting and record his name on one side or the other of this vital issue. Doubtless, the Society will go on and flourish under whichever party gets the ascendancy, but so radical is the difference that it can never again flourish under both. The objects, means, and methods being radically different, it would only paralyze its usefulness to attempt to blend them, and therefore this coming vote is to decide into which of two very different channels the Society will in future direct its usefulness. In either channel it may or may not do as much good as before, and if not, the new organizations that may grow out of the division may more than counterbalance the deficiency. As both sides cannot now occupy the same ground, the question simply is, which shall hold it? and in this decision every man entitled to a vote on either side should see to it that his name is fairly recorded upon the side of his choice, after the full deliberation of two years. Whether his side succeeds or not is by no means the most important consideration, important though it be. The main point is to have his individual position clearly and unmistakably defined. The vote should, and doubtless will be, by ayes and noes, since both sides should be equally determined to have a full and clear record.—*Ephemeris of Materia Medica*, January, 1884.

THE NEW CODE IN CONGRESS.—Senator Hale introduced in the Senate, on Tuesday last, a bill "to secure to the medical profession equal rights in the service of the United States," which provides that all appointments to medical service under the Government shall be made from graduates of legally chartered medical institutions, without discriminating in favor of or against any school or theory of medical practice.

NEW YORK COUNTY MEDICAL ASSOCIATION.—The officers of this new Society are:

President.—Wm. Detmold, M.D.
Vice-President.—C. A. Leale, M.D.
Recording Secretary.—E. A. Judson, M.D.
Corresponding Secretary.—W. V. White, M.D.
Treasurer.—A. S. Church, M.D.

At the first meeting, held last week, at which Dr. Flint's paper was read, there were about three hundred physicians present.

LIBERAL BEQUEST OF DR. ELLIS TO HARVARD UNIVERSITY.—By the will of the late Dr. Calvin Ellis, his estate is left in trust for the benefit of his sister, and upon her decease fifty thousand dollars goes to Harvard College, the net income of which, after deducting five per cent. for the purpose of increasing the fund, is to be applied to the payment of the tuition and other expenses of certain descendants of Davis Ellis, and others who may be members of the College. The residue of the trust property, if any, is also to be paid to the President and Fellows of Harvard College, the income, after the same deduction of five per cent., to be applied to the payment of a salary of a professor of pathological anatomy, under certain regulations as to the amount of such salary.

ANNALS OF ANATOMY AND SURGERY.—It is announced that on account of the departure of the senior editor, DR. PILCHER, for Europe, and the expected departure of his colleague, DR. FOWLER, the publication of the *Annals of Anatomy and Surgery* is necessarily suspended during their absence. If circumstances shall seem to warrant the resumption of the journal with the beginning of another year, due notice will be given.

THE OHIO STATE SANITARY ASSOCIATION will hold its first meeting February 14 and 15, 1884, in the city of Columbus.

INTERNATIONAL MEDICAL CONGRESS.—The following list of subjects is proposed for communications and discussions in the Section of Dermatology and Syphilis:

1. On the Syphilitic Origin of Tabes.
2. Treatment of Syphilis with Mercurial Injections.
3. Excision of the Initial Induration as Abortive Treatment.
4. The Etiology of Leprosy.
5. On a New System in Skin Pathology.
6. The Etiology of Lupus Vulgaris.
7. The Pathogeny of Gonorrhœal Rheumatism.
8. The Term of Infectiousness of Gonorrhœa.
9. The Significance of Micro-organisms in Skin Diseases, formerly considered as Non-parasitic.—*Journal of Cutaneous and Venereal Diseases*, January, 1884.

DR. CHARLES T. PALMER, of Pottsville, has been appointed consulting oculist at the Miners' Hospital.

THE ANNUAL ELECTIONS AT THE PARIS SOCIETIES.—M. Marc Sée has been elected President of the *Société de Chirurgie*, for 1884.

M. Delpeche, President of the *Société de Thérapeutique*.

M. Bucquoy, President of the *Société Médicale des Hôpitaux*.

M. Laborde, President of the *Société de Biologie*.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending January 12, 1884, indicate that pneumonia has greatly increased; that measles, bronchitis, tonsillitis, and consumption have increased; and that rheumatism and whooping-cough have decreased in area of prevalence.

Including reports by regular observers and others, diphtheria was reported present during the week ending January 12, and since, at twelve places, scarlet fever at sixteen places, and measles at ten places.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 14 TO JANUARY 21, 1884.

BREWSTER, W. B., *First Lieutenant and Assistant Surgeon.*—Resignation accepted by the President to take effect February 7, 1884.—*S. O. 10, A. G.O.*, January 12, 1884.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.